UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549

FORM 10-Q

(Mark One)

☒ QUARTERLY REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934

For the quarterly period ended September 30, 2020

or

☐ TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934

For the transition period from _____ to _____

Commission file number **1-442**

THE BOEING COMPANY

(Exact name of registrant as specified in its charter)

Delaware	**91-0425694**
(State or other jurisdiction of incorporation or organization)	**(I.R.S. Employer Identification No.)**
100 N. Riverside Plaza, Chicago, IL	**60606-1596**
(Address of principal executive offices)	**(Zip Code)**

(312) 544-2000

(Registrant's telephone number, including area code)

Indicate by check mark whether the registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days. Yes ☒ No ☐

Indicate by check mark whether the registrant has submitted electronically every Interactive Data File required to be submitted pursuant to Rule 405 of Regulation S-T (§232.405/ of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit such files). Yes ☒ No ☐

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, a smaller reporting company, or an emerging growth company. See the definitions of "large accelerated filer," "accelerated filer," "smaller reporting company," and "emerging growth company" in Rule 12b-2 of the Exchange Act. (Check one):

Large Accelerated Filer	☒	Accelerated filer	☐
Non-accelerated filer	☐	Smaller reporting company	☐
Emerging growth company	☐		

If an emerging growth company, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 13(a) of the Exchange Act. ☐

Indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Exchange Act).

Yes ☐ No ☒

Securities registered pursuant to Section 12(b) of the Act:

Title of each class	Trading Symbol(s)	Name of each exchange on which registered
Common Stock, $5.00 Par Value	BA	New York Stock Exchange

As of October 21, 2020, there were 564,529,686 shares of common stock, $5.00 par value, issued and outstanding.

THE BOEING COMPANY
FORM 10-Q
For the Quarter Ended September 30, 2020
INDEX

Part I. Financial Information

Item 1. Financial Statements

The Boeing Company and Subsidiaries
Condensed Consolidated Statements of Operations
(Unaudited)

(Dollars in millions, except per share data)	Nine months ended September 30		Three months ended September 30	
	2020	2019	**2020**	2019
Sales of products	**$34,656**	$50,514	**$11,402**	$17,195
Sales of services	**8,198**	8,134	**2,737**	2,785
Total revenues	**42,854**	58,648	**14,139**	19,980
Cost of products	**(36,001)**	(46,584)	**(10,910)**	(14,674)
Cost of services	**(6,817)**	(6,752)	**(2,185)**	(2,241)
Boeing Capital interest expense	**(33)**	(49)	**(10)**	(15)
Total costs and expenses	**(42,851)**	(53,385)	**(13,105)**	(16,930)
	3	5,263	**1,034**	3,050
Loss from operating investments, net	**(61)**	(3)	**(14)**	(8)
General and administrative expense	**(2,989)**	(2,857)	**(955)**	(1,001)
Research and development expense, net	**(1,871)**	(2,470)	**(574)**	(778)
Gain/(loss) on dispositions, net	**200**	296	**108**	(4)
(Loss)/earnings from operations	**(4,718)**	229	**(401)**	1,259
Other income, net	**325**	334	**119**	121
Interest and debt expense	**(1,458)**	(480)	**(643)**	(203)
(Loss)/earnings before income taxes	**(5,851)**	83	**(925)**	1,177
Income tax benefit/(expense)	**2,349**	291	**459**	(10)
Net (loss)/earnings	**(3,502)**	374	**(466)**	1,167
Less: net loss attributable to noncontrolling interest	**(49)**		**(17)**	
Net (loss)/earnings attributable to Boeing Shareholders	**($3,453)**	$374	**($449)**	$1,167
Basic (loss)/earnings per share	**($6.10)**	$0.66	**($0.79)**	$2.07
Diluted (loss)/earnings per share	**($6.10)**	$0.66	**($0.79)**	$2.05
Weighted average diluted shares (millions)	**566.3**	570.4	**566.6**	569.2

See Notes to the Condensed Consolidated Financial Statements.

The Boeing Company and Subsidiaries
Condensed Consolidated Statements of Comprehensive Income
(Unaudited)

(Dollars in millions)	Nine months ended September 30		Three months ended September 30	
	2020	2019	**2020**	2019
Net (loss)/earnings	**($3,502)**	$374	**($466)**	$1,167
Other comprehensive (loss)/income, net of tax:				
Currency translation adjustments	**15**	(61)	**48**	(59)
Unrealized gain on certain investments, net of tax of $0, $0, $0 and $0		1		
Unrealized (loss)/gain on derivative instruments:				
Unrealized (loss)/gain arising during period, net of tax of $31, $30, ($23) and $25	**(107)**	(106)	**79**	(89)
Reclassification adjustment for losses/(gains) included in net (loss)/earnings, net of tax of ($6), ($6), ($2) and ($7)	**20**	22	**8**	25
Total unrealized (loss)/gain on derivative instruments, net of tax	**(87)**	(84)	**87**	(64)
Defined benefit pension plans and other postretirement benefits:				
Prior service credit arising during the period, net of tax of ($4), $0, ($4) and $0	**13**		**13**	
Amortization of prior service credits included in net periodic pension cost, net of tax of $22, $18, $10 and $5	**(67)**	(67)	**(22)**	(22)
Net actuarial loss arising during the period, net of tax of $19, $0, $16 and $0	**(65)**		**(53)**	
Amortization of actuarial losses included in net periodic pension cost, net of tax of ($179), ($97), ($76) and ($32)	**562**	350	**172**	117
Settlements and curtailments included in net loss, net of tax of ($1), $0, $0 and $0	**3**		**1**	
Pension and postretirement cost related to our equity method investments, net of tax of $0, ($5), $0, and ($3)		17		9
Total defined benefit pension plans and other postretirement benefits, net of tax	**446**	300	**111**	104
Other comprehensive income/(loss), net of tax	**374**	156	**246**	(19)
Comprehensive loss related to noncontrolling interests		(22)		(15)
Comprehensive (loss)/income, net of tax	**(3,128)**	508	**(220)**	1,133
Less: Comprehensive loss related to noncontrolling interest	**(49)**	(22)	**(17)**	(15)
Comprehensive (loss)/income attributable to Boeing Shareholders, net of tax	**($3,079)**	$530	**($203)**	$1,148

See Notes to the Condensed Consolidated Financial Statements.

The Boeing Company and Subsidiaries
Condensed Consolidated Statements of Financial Position
(Unaudited)

(Dollars in millions, except per share data)	**September 30 2020**	December 31 2019
Assets		
Cash and cash equivalents	**$10,564**	$9,485
Short-term and other investments	**16,552**	545
Accounts receivable, net	**2,762**	3,266
Unbilled receivables, net	**8,860**	9,043
Current portion of customer financing, net	**100**	162
Inventories	**86,961**	76,622
Other current assets, net	**5,213**	3,106
Total current assets	**131,012**	102,229
Customer financing, net	**2,010**	2,136
Property, plant and equipment, net of accumulated depreciation of $20,241 and $19,342	**11,969**	12,502
Goodwill	**8,071**	8,060
Acquired intangible assets, net	**2,941**	3,338
Deferred income taxes	**704**	683
Investments	**1,052**	1,092
Other assets, net of accumulated amortization of $671 and $580	**3,502**	3,585
Total assets	**$161,261**	$133,625
Liabilities and equity		
Accounts payable	**$14,479**	$15,553
Accrued liabilities	**22,220**	22,868
Advances and progress billings	**51,974**	51,551
Short-term debt and current portion of long-term debt	**3,634**	7,340
Total current liabilities	**92,307**	97,312
Deferred income taxes	**503**	413
Accrued retiree health care	**4,429**	4,540
Accrued pension plan liability, net	**15,343**	16,276
Other long-term liabilities	**2,907**	3,422
Long-term debt	**57,325**	19,962
Total liabilities	**172,814**	141,925
Shareholders' equity:		
Common stock, par value $5.00 — 1,200,000,000 shares authorized; 1,012,261,159 shares issued	**5,061**	5,061
Additional paid-in capital	**6,687**	6,745
Treasury stock, at cost - 447,744,896 and 449,352,405 shares	**(54,819)**	(54,914)
Retained earnings	**47,029**	50,644
Accumulated other comprehensive loss	**(15,779)**	(16,153)
Total shareholders' equity	**(11,821)**	(8,617)
Noncontrolling interests	**268**	317
Total equity	**(11,553)**	(8,300)
Total liabilities and equity	**$161,261**	$133,625

See Notes to the Condensed Consolidated Financial Statements.

The Boeing Company and Subsidiaries
Condensed Consolidated Statements of Cash Flows
(Unaudited)

(Dollars in millions)	**Nine months ended September 30**	
	2020	2019
Cash flows – operating activities:		
Net (loss)/earnings	**($3,502)**	$374
Adjustments to reconcile net loss to net cash (used)/provided by operating activities:		
Non-cash items –		
Share-based plans expense	**165**	160
Depreciation and amortization	**1,668**	1,643
Investment/asset impairment charges, net	**317**	106
Customer financing valuation adjustments	**12**	249
Gain on dispositions, net	**(200)**	(296)
Other charges and credits, net	**912**	190
Changes in assets and liabilities –		
Accounts receivable	**125**	315
Unbilled receivables	**56**	(1,053)
Advances and progress billings	**428**	2,355
Inventories	**(9,653)**	(9,565)
Other current assets	**319**	(224)
Accounts payable	**(3,303)**	1,626
Accrued liabilities	**967**	5,495
Income taxes receivable, payable and deferred	**(2,404)**	(989)
Other long-term liabilities	**(149)**	(577)
Pension and other postretirement plans	**(556)**	(570)
Customer financing, net	**108**	391
Other	**289**	144
Net cash used by operating activities	**(14,401)**	(226)
Cash flows – investing activities:		
Property, plant and equipment additions	**(1,038)**	(1,387)
Property, plant and equipment reductions	**275**	334
Acquisitions, net of cash acquired		(492)
Contributions to investments	**(25,846)**	(1,439)
Proceeds from investments	**9,772**	967
Purchase of distribution rights		(20)
Other	**14**	(10)
Net cash used by investing activities	**(16,823)**	(2,047)
Cash flows – financing activities:		
New borrowings	**42,362**	19,621
Debt repayments	**(8,792)**	(8,978)
Contributions from noncontrolling interests		7
Stock options exercised	**31**	51
Employee taxes on certain share-based payment arrangements	**(169)**	(241)
Common shares repurchased		(2,651)
Dividends paid	**(1,158)**	(3,473)
Net cash provided by financing activities	**32,274**	4,336
Effect of exchange rate changes on cash and cash equivalents, including restricted	**26**	(27)
Net increase in cash & cash equivalents, including restricted	**1,076**	2,036
Cash & cash equivalents, including restricted, at beginning of year	**9,571**	7,813
Cash & cash equivalents, including restricted, at end of period	**10,647**	9,849
Less restricted cash & cash equivalents, included in Investments	**83**	86
Cash and cash equivalents at end of period	**$10,564**	$9,763

See Notes to the Condensed Consolidated Financial Statements.

The Boeing Company and Subsidiaries
Condensed Consolidated Statements of Equity
For the nine months ended September 30, 2020 and 2019
(Unaudited)

	Boeing shareholders						
(Dollars in millions, except per share data)	Common Stock	Additional Paid-In Capital	Treasury Stock	Retained Earnings	Accumulated Other Comprehensive Loss	Non-controlling Interests	Total
Balance at January 1, 2019	$5,061	$6,768	($52,348)	$55,941	($15,083)	$71	$410
Net earnings				374		(22)	352
Other comprehensive income, net of tax of ($60)					156		156
Share-based compensation and related dividend equivalents		176		(16)			160
Treasury shares issued for stock options exercised, net		(42)	82				40
Treasury shares issued for other share-based plans, net		(214)	(7)				(221)
Common shares repurchased			(2,651)				(2,651)
Cash dividends declared ($4.11 per share)				(2,313)			(2,313)
Changes in noncontrolling interests						258	258
Balance at September 30, 2019	$5,061	$6,688	($54,924)	$53,986	($14,927)	$307	($3,809)
Balance at December 31, 2019	**$5,061**	**$6,745**	**($54,914)**	**$50,644**	**($16,153)**	**$317**	**($8,300)**
Impact of ASU 2016-13				**(162)**			**(162)**
Balance at January 1, 2020	**$5,061**	**$6,745**	**($54,914)**	**$50,482**	**($16,153)**	**$317**	**($8,462)**
Net loss				**(3,453)**		**(49)**	**(3,502)**
Other comprehensive income, net of tax of ($118)					**374**		**374**
Share-based compensation and related dividend equivalents		**165**					**165**
Treasury shares issued for stock options exercised, net		**(22)**	**53**				**31**
Treasury shares issued for other share-based plans, net		**(201)**	**42**				**(159)**
Balance at September 30, 2020	**$5,061**	**$6,687**	**($54,819)**	**$47,029**	**($15,779)**	**$268**	**($11,553)**

See Notes to the Condensed Consolidated Financial Statements.

The Boeing Company and Subsidiaries
Condensed Consolidated Statements of Equity
For the three months ended September 30, 2020 and 2019
(Unaudited)

	Boeing shareholders						
(Dollars in millions, except per share data)	Common Stock	Additional Paid-In Capital	Treasury Stock	Retained Earnings	Accumulated Other Comprehensive Loss	Non-controlling Interests	Total
Balance at July 1, 2019	$5,061	$6,638	($54,932)	$52,819	($14,908)	$379	($4,943)
Net earnings				1,167		(15)	1,152
Other comprehensive loss, net of tax of ($12)					(19)		(19)
Share-based compensation and related dividend equivalents		56					56
Treasury shares issued for stock options exercised, net		(3)					(3)
Treasury shares issued for other share-based plans, net		(3)	8				5
Changes in noncontrolling interests						(57)	(57)
Balance at September 30, 2019	$5,061	$6,688	($54,924)	$53,986	($14,927)	$307	($3,809)
Balance at July 1, 2020	**$5,061**	**$6,648**	**($54,829)**	**$47,478**	**($16,025)**	**$285**	**($11,382)**
Net loss				**(449)**		**(17)**	**(466)**
Other comprehensive income, net of tax of ($79)					**246**		**246**
Share-based compensation and related dividend equivalents		**50**					**50**
Treasury shares issued for stock options exercised, net		**(2)**	**6**				**4**
Treasury shares issued for other share-based plans, net		**(9)**	**4**				**(5)**
Balance at September 30, 2020	**$5,061**	**$6,687**	**($54,819)**	**$47,029**	**($15,779)**	**$268**	**($11,553)**

See Notes to the Condensed Consolidated Financial Statements.

The Boeing Company and Subsidiaries
Notes to Condensed Consolidated Financial Statements
Summary of Business Segment Data
(Unaudited)

(Dollars in millions)	Nine months ended September 30		Three months ended September 30	
	2020	2019	**2020**	2019
Revenues:				
Commercial Airplanes	**$11,434**	$24,793	**$3,596**	$8,249
Defense, Space & Security	**19,478**	20,168	**6,848**	7,002
Global Services	**11,810**	13,820	**3,694**	4,658
Boeing Capital	**205**	207	**71**	66
Unallocated items, eliminations and other	**(73)**	(340)	**(70)**	5
Total revenues	**$42,854**	$58,648	**$14,139**	$19,980
Earnings/(loss) from operations:				
Commercial Airplanes	**($6,199)**	($3,813)	**($1,369)**	($40)
Defense, Space & Security	**1,037**	2,581	**628**	754
Global Services	**307**	2,013	**271**	673
Boeing Capital	**47**	86	**30**	29
Segment operating (loss)/earnings	**(4,808)**	867	**(440)**	1,416
Unallocated items, eliminations and other	**(965)**	(1,731)	**(314)**	(521)
FAS/CAS service cost adjustment	**1,055**	1,093	**353**	364
(Loss)/earnings from operations	**(4,718)**	229	**(401)**	1,259
Other income, net	**325**	334	**119**	121
Interest and debt expense	**(1,458)**	(480)	**(643)**	(203)
(Loss)/earnings before income taxes	**(5,851)**	83	**(925)**	1,177
Income tax benefit/(expense)	**2,349**	291	**459**	(10)
Net (loss)/earnings	**(3,502)**	374	**(466)**	1,167
Less: Net loss attributable to noncontrolling interest	**(49)**		**(17)**	
Net (loss)/earnings attributable to Boeing Shareholders	**($3,453)**	$374	**($449)**	$1,167

This information is an integral part of the Notes to the Condensed Consolidated Financial Statements. See Note 19 for further segment results.

The Boeing Company and Subsidiaries
Notes to the Condensed Consolidated Financial Statements
(Dollars in millions, except otherwise stated)
(Unaudited)

Note 1 – Basis of Presentation

The condensed consolidated interim financial statements included in this report have been prepared by management of The Boeing Company (herein referred to as “Boeing”, the “Company”, “we”, “us”, or “our”). In the opinion of management, all adjustments (consisting of normal recurring accruals) necessary for a fair presentation are reflected in the interim financial statements. The results of operations for the period ended September 30, 2020 are not necessarily indicative of the operating results for the full year. The interim financial statements should be read in conjunction with the audited Consolidated Financial Statements, including the notes thereto, included in our 2019 Annual Report on Form 10-K. Certain amounts in prior periods have been adjusted to conform with the current year presentation.

Liquidity Matters

The global outbreak of COVID-19 and the ongoing grounding of the 737 MAX airplane are having a significant adverse impact on our business and are expected to continue to negatively impact revenue, earnings and operating cash flow in future quarters. The COVID-19 pandemic has caused an unprecedented shock to demand for air travel, creating a tremendous challenge for our customers, our business and the entire aerospace manufacturing and services sector. We currently expect it will take approximately three years for travel to return to 2019 levels and a few years beyond that for the industry to return to long-term trend growth. There is significant uncertainty with respect to when commercial air traffic levels will recover, and whether and at what point capacity will return to and/or exceed pre-COVID-19 levels.

During the first nine months of 2020, net cash used by operating activities was $14.4 billion and we expect negative operating cash flows in future quarters until commercial deliveries ramp up. In the first quarter of 2020, we entered into and fully drew on a $13.8 billion two-year delayed draw term loan credit agreement (delayed draw term loan facility). In the second quarter of 2020, we issued $25 billion of fixed rate senior notes that mature between 2023 and 2060. As a result, our cash and short-term investment balance was $27.1 billion and our debt balance was $61.0 billion at September 30, 2020.

The major credit rating agencies downgraded our short term and long term credit ratings during the first half of 2020, and there is risk for further downgrades. At September 30, 2020, debt includes $1.9 billion of commercial paper, all of which matures in the fourth quarter of 2020, down from $6.1 billion at December 31, 2019. In the current environment, we may have limited future access to the commercial paper market. In addition, we have term notes of $350 maturing in the fourth quarter of 2020 and $1,450 maturing in 2021.

At September 30, 2020, trade payables included $4.8 billion payable to suppliers who have elected to participate in supply chain financing programs. While access to supply chain financing has been reduced due to our current credit ratings and debt levels, we do not believe that these or future changes in the availability of supply chain financing will have a significant impact on our liquidity.

At September 30, 2020 and December 31, 2019, we had $9.6 billion of unused borrowing capacity on revolving credit agreements. We anticipate that these credit lines will primarily serve as back-up liquidity to support our general corporate borrowing needs. $3.2 billion of the $9.6 billion is a 364-day revolving credit facility, which was set to expire in October 2020. We renewed that 364-day revolving credit facility at $3.1 billion, which now expires in October 2021.

In addition to our debt issuances, we have taken a number of actions to improve liquidity. During the first quarter of 2020, our Board of Directors terminated its prior authorization to repurchase shares of the Company’s outstanding common stock and suspended the declaration and/or payment of dividends until further notice. We have also reduced production rates in our commercial business to reflect the impact of COVID-19 on the industry. We have furloughed certain employees and are executing on our plans to

reduce our workforce through a combination of voluntary and involuntary layoffs and natural turnover. In the second and third quarters of 2020, we recorded severance costs for approximately 26,000 employees, of which approximately half have left the Company as of September 30, 2020, and the remainder are expected to leave in 2020 and 2021.

We are also working with our customers and supply chain to accelerate receipts and conserve cash. For example, the United States Department of Defense (U.S. DoD) has taken steps to work with its industry partners to increase liquidity in the form of increased progress payment rates and reductions in withholds among other initiatives. We are also deferring certain tax payments pursuant to the Coronavirus Aid, Relief, and Economic Security (CARES) Act.

In the fourth quarter of 2020, the Company plans to begin using our common stock in lieu of cash to fund Company contributions to our 401(k) plans for the foreseeable future. Common stock would be contributed to our 401(k) plans following each pay period. We expect this measure to further enable the Company to conserve cash.

We have reduced discretionary spending, including reducing or deferring research and development and capital expenditures.

In July 2020, we announced our business transformation efforts to assess our business across five key pillars – infrastructure, overhead and organization, portfolio and investments, supply chain health and operational excellence. Within the infrastructure pillar we are assessing our overall facility requirements in light of reduced demand in our commercial businesses and remote and virtual work opportunities for large numbers of our workforce. The overhead and organization pillar is focused on our cost structure and how we are organized so we can right size our workforce and simplify and reduce management layers and bureaucracy. The portfolio and investments pillar is working on aligning our portfolio and investments to focus on our core business and the changes in market conditions. The supply chain pillar is focused on supply chain health and stability, reducing indirect procurement spend and streamlining our transportation, logistics and warehousing approach. The operational excellence pillar is focused on improving performance, enhancing quality and reducing rework. Successful execution of these measures will improve near term liquidity and long term cost competitiveness. Apart from severance, we did not incur significant restructuring charges during the quarter.

Based on our current best estimates of market demand, planned production rates, timing of cash receipts and expenditures, our ability to successfully implement further actions to improve liquidity as well our ability to access additional liquidity, if needed, we believe it is probable that we will be able to fund our operations for the foreseeable future.

Standards Issued and Implemented

In the first quarter of 2020, we adopted ASU 2016-13, *Financial Instruments - Credit Losses (Topic 326): Measurement of Credit Losses on Financial Instr*uments (ASU 2016-13), using a modified retrospective method, which resulted in the recognition of allowances for credit losses on our Condensed Consolidated Statement of Financial Position as of January 1, 2020 and a $162 cumulative-effect adjustment to retained earnings to align our credit loss methodology with the new standard. The standard replaces the incurred loss impairment methodology under Topic 310 with a methodology that reflects expected credit losses and requires the use of a forward-looking expected credit loss model for accounts receivables, loans, and certain other financial assets. See Note 5, 8 and 9 for additional disclosures.

In the first quarter of 2020, we also adopted ASU 2017-04, *Intangibles-Goodwill and Other (Topic 350): Simplifying the Test for Goodwill Impairment (*ASU 2017-04). See Note 2 for additional disclosures.

Significant Accounting Policies - Update

Our significant accounting policies are described in "Note 1: Summary of Significant Accounting Policies" of our Annual Report on Form 10-K for the year ended December 31, 2019. Our updated significant accounting policies described below reflect the impact of adopting Topic 326.

Allowances for losses on certain financial assets

We establish allowances for credit losses on accounts receivable, unbilled receivables, customer financing receivables, and certain other financial assets. The adequacy of these allowances are assessed quarterly through consideration of factors including, but not limited to, customer credit ratings, bankruptcy filings, published or estimated credit default rates, age of the receivable, expected loss rates and collateral exposures. We assign internal credit ratings for all customers and determine the creditworthiness of each customer based upon publicly available information and information obtained directly from our customers. Our rating categories are comparable to those used by major credit rating agencies.

Use of Estimates

The preparation of financial statements in conformity with U.S. generally accepted accounting principles (GAAP) requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the date of the financial statements and the reported amounts of revenues and expenses during the reporting period. We believe that the accounting estimates and assumptions are appropriate given the increased uncertainties surrounding the severity and duration of the impacts of the COVID-19 pandemic, however actual results could differ from those estimates.

Changes in estimated revenues, cost of sales and the related effect on operating income are recognized using a cumulative catch-up adjustment which recognizes in the current period the cumulative effect of the changes on current and prior periods based on a long-term contract's percentage-of-completion. When the current estimates of total sales and costs for a long-term contract indicate a loss, a provision for the entire reach-forward loss on the long-term contract is recognized.

Net cumulative catch-up adjustments to prior periods' revenue and earnings, including certain reach-forward losses, across all long-term contracts were as follows:

(In millions - except per share amounts)	**Nine months ended September 30**		**Three months ended September 30**	
	2020	2019	**2020**	2019
(Decrease)/increase to Revenue	**($265)**	$166	**$25**	($63)
(Decrease)/increase to (Loss)/earnings from operations	**($787)**	$152	**($38)**	($23)
(Decrease)/increase to Diluted EPS	**($0.83)**	$1.20	**($0.03)**	($0.04)

Note 2 – Goodwill and Acquired Intangibles

In the first quarter of 2020, we adopted ASU 2017-04, *Intangibles-Goodwill and Other (Topic 350): Simplifying the Test for Goodwill Impairment*. The standard simplifies the quantitative impairment test from a two-step process to a one-step process. The quantitative test is performed by comparing the carrying value of net assets to the estimated fair value of the related operations. If the fair value is determined to be less than carrying value, the shortfall up to the carrying value of the goodwill represents the amount of goodwill impairment. The standard continues to permit a company to test goodwill for impairment by performing a qualitative assessment or using the quantitative test.

We completed our annual assessment of goodwill as of April 1, 2020 and determined that the fair value of each reporting unit exceeded its corresponding carrying value and that there is no impairment of goodwill.

As a result of the continuing significant adverse impacts of the COVID-19 pandemic on our Commercial Airplanes and Commercial Services businesses, we concluded it is a triggering event for testing whether goodwill recorded by our Commercial Airplanes and Commercial Services reporting units is impaired. At September 30, 2020, Commercial Airplanes has $1,315 of goodwill and Commercial Services has $3,078. We performed a qualitative assessment and determined it is not more likely than not that the fair values of our Commercial Airplane and Commercial Services reporting units were less than their carrying

values as of September 30, 2020. We will continue to monitor the impacts of the COVID-19 pandemic in future quarters. Changes in our forecasts, especially with respect to our Commercial Services reporting unit, or further decreases in the value of our common stock could cause book values to exceed fair values which may result in goodwill impairment charges in future periods.

Note 3 – Earnings Per Share

Basic and diluted earnings per share are computed using the two-class method, which is an earnings allocation method that determines earnings per share for common shares and participating securities. The undistributed earnings are allocated between common shares and participating securities as if all earnings had been distributed during the period. Participating securities and common shares have equal rights to undistributed earnings.

Basic earnings per share is calculated by taking net earnings, less earnings available to participating securities, divided by the basic weighted average common shares outstanding.

Diluted earnings per share is calculated by taking net earnings, less earnings available to participating securities, divided by the diluted weighted average common shares outstanding.

The elements used in the computation of basic and diluted earnings per share were as follows:

(In millions - except per share amounts)	**Nine months ended September 30**		**Three months ended September 30**	
	2020	2019	**2020**	2019
Net (loss)/earnings attributable to Boeing Shareholders	**($3,453)**	$374	**($449)**	$1,167
Less: earnings available to participating securities				1
Net (loss)/earnings available to common shareholders	**($3,453)**	$374	**($449)**	$1,166
Basic				
Basic weighted average shares outstanding	**566.3**	566.2	**566.6**	565.2
Less: participating securities	**0.5**	0.6	**0.5**	0.6
Basic weighted average common shares outstanding	**565.8**	565.6	**566.1**	564.6
Diluted				
Basic weighted average shares outstanding	**566.3**	566.2	**566.6**	565.2
Dilutive potential common shares[(1)]		4.2		4.0
Diluted weighted average shares outstanding	**566.3**	570.4	**566.6**	569.2
Less: participating securities	**0.5**	0.6	**0.5**	0.6
Diluted weighted average common shares outstanding	**565.8**	569.8	**566.1**	568.6
Net (loss)/earnings per share:				
Basic	**($6.10)**	$0.66	**($0.79)**	$2.07
Diluted	**(6.10)**	0.66	**(0.79)**	2.05

(1) Diluted earnings per share includes any dilutive impact of stock options, restricted stock units, performance-based restricted stock units and performance awards.

As a result of incurring a net loss for the nine and three months ended September 30, 2020 potential common shares of 1.6 million and 1.3 million were excluded from diluted loss per share because the effect would have been antidilutive. In addition, the following table includes the number of shares that may

be dilutive potential common shares in the future. These shares were not included in the computation of diluted loss per share because the effect was either antidilutive or the performance condition was not met.

(Shares in millions)	**Nine months ended September 30**		**Three months ended September 30**	
	2020	2019	**2020**	2019
Performance awards	**6.1**	2.6	**6.0**	2.6
Performance-based restricted stock units	**1.4**	0.6	**1.3**	0.6

Note 4 – Income Taxes

Our effective income tax rates were 40.1% and 49.6% for the nine and three months ended September 30, 2020 and (350.6)% and 0.8% for the same periods in the prior year. The 2020 tax rate includes tax benefits from the CARES Act enacted on March 27, 2020 due to the Act's five year net operating loss carry back provision while the 2019 tax rate reflects tax benefits associated with intangible income derived from serving non-U.S. markets. The carry back provisions enable us to benefit from certain losses and re-measure certain deferred tax assets and liabilities at the former federal tax rate of 35%. The tax rates in 2020 and 2019 also reflect research and development tax credits and excess tax benefits related to share-based payments. The year to date tax rate variance is primarily due to low pre-tax income in 2019, resulting in larger 2019 discrete tax rate benefits.

The Company has deferred income tax assets that can be used in future years to offset taxable income and reduce income taxes payable. The deferred income tax assets relate primarily to U.S. federal and state tax jurisdictions. Management has determined, based on the Company's history of prior operating earnings and its expectations for the future, and all other evidence, that future U.S. federal taxable income will more likely than not be sufficient to realize deferred income tax assets. We have valuation allowances for certain U.S. state deferred tax assets in jurisdictions where we have determined it is not more likely than not that future taxable income will be sufficient to realize deferred income tax assets. If, however, our expectations for future income and/or other evidence changes, including assumptions regarding 737 MAX return to service, we may record additional valuation allowances in future periods that may be material.

Federal income tax audits have been settled for all years prior to 2015. The Internal Revenue Service (IRS) began the 2015-2017 federal tax audit in the first quarter of 2019. We are also subject to examination in major state and international jurisdictions for the 2007-2018 tax years. We believe appropriate provisions for all outstanding tax issues have been made for all jurisdictions and all open years.

Audit outcomes and the timing of audit settlements are subject to significant uncertainty. It is reasonably possible that within the next 12 months unrecognized tax benefits related to federal matters under audit may decrease by up to $680 based on current estimates.

Note 5 - Allowances for Losses on Financial Assets

Upon adoption of ASU 2016-13, we recorded a $162 cumulative-effect adjustment to retained earnings to increase our allowances for credit losses, resulting in a balance of $337 as of January 1, 2020. The change in allowances for expected credit losses for the nine months ended September 30, 2020 consisted of the following:

	Accounts receivable, net	Unbilled receivables, net	Other Current Assets, net	Customer financing, net	Other Assets, net	Total
Balance at January 1, 2020	**($138)**	**($81)**	**($38)**	**($5)**	**($75)**	**($337)**
Changes in estimates	**(296)**	**(46)**	**(20)**	**(12)**	**(3)**	**(377)**
Write-offs	**3**					**3**
Balance at September 30, 2020	**($431)**	**($127)**	**($58)**	**($17)**	**($78)**	**($711)**

Note 6 – Inventories

Inventories consisted of the following:

	September 30 2020	December 31 2019
Long-term contracts in progress	**$871**	$1,187
Commercial aircraft programs	**75,170**	66,016
Commercial spare parts, used aircraft, general stock materials and other	**10,920**	9,419
Total	**$86,961**	$76,622

Long-term contracts in progress includes Delta launch program inventory that is being sold at cost to United Launch Alliance (ULA) under an inventory supply agreement that terminates on March 31, 2021. The inventory balance was $176 at September 30, 2020 and December 31, 2019. See indemnifications to ULA in Note 11.

Commercial spare parts, used aircraft, general stock materials and other includes capitalized precontract costs of $821 at September 30, 2020 and $711 at December 31, 2019 primarily related to KC-46A Tanker and Commercial Crew. See Note 10.

Commercial Aircraft Programs

The increase in commercial airplane programs inventory during 2020 reflects the large number of undelivered aircraft due to the 737 MAX grounding, lower wide-body deliveries driven by the impacts of the COVID-19 pandemic and 787 quality issues and associated rework, and increases in 777X inventory prior to entry into service. We are currently remarketing certain aircraft and may have to remarket additional aircraft in future periods. If we are unable to successfully remarket the aircraft, determine further production rates reductions are necessary, and/or contract the program accounting quantities, future earnings may be reduced and/or the 787 or 777X programs may be in a reach-forward loss position.

At September 30, 2020 and December 31, 2019, commercial aircraft programs inventory included $1,852 and $1,313 of deferred production costs and $512 and $521 of unamortized tooling and other non-recurring costs related to the 737 program. At September 30, 2020, $2,305 of 737 deferred production costs, unamortized tooling and other non-recurring costs are expected to be recovered from units included in the program accounting quantity that have firm orders and $59 is expected to be recovered from units included in the program accounting quantity that represent expected future orders.

At September 30, 2020 and December 31, 2019, commercial aircraft programs inventory included the following amounts related to the 777X program: $7,634 and $5,628 of work in process and $3,175 and $2,914 of unamortized tooling and other non-recurring costs.

At September 30, 2020 and December 31, 2019, commercial aircraft programs inventory included the following amounts related to the 787 program: $28,730 and $24,772 of work in process (including deferred production costs of $15,432 and $18,716), $1,921 and $2,202 of supplier advances, and $1,877 and $2,092 of unamortized tooling and other non-recurring costs. At September 30, 2020, $13,996 of 787 deferred production costs, unamortized tooling and other non-recurring costs are expected to be recovered from units included in the program accounting quantity that have firm orders and $3,313 is expected to be recovered from units included in the program accounting quantity that represent expected future orders.

Commercial aircraft programs inventory included amounts credited in cash or other consideration (early issue sales consideration) to airline customers totaling $2,960 and $2,863 at September 30, 2020 and December 31, 2019.

Note 7 – Contracts with Customers

Unbilled receivables decreased from $9,043 at December 31, 2019 to $8,860 at September 30, 2020, primarily driven by an increase in billings at Defense, Space & Security (BDS) and Global Services (BGS), as well as an increase in allowances for expected credit losses at BGS.

Advances and progress billings increased from $51,551 at December 31, 2019 to $51,974 at September 30, 2020, primarily driven by advances on orders received in excess of revenue recognized at Commercial Airplanes (BCA), BDS and BGS, partially offset by the return of customer advances at BCA.

Revenues recognized during the nine months ended September 30, 2020 and 2019 from amounts recorded as Advances and progress billings at the beginning of each year were $6,752 and $13,216. Revenues recognized during the three months ended September 30, 2020 and 2019 from amounts recorded as Advances and progress billings at the beginning of each year were $1,497 and $3,100.

Note 8 – Customer Financing

Customer financing primarily relates to the Boeing Capital (BCC) segment and consisted of the following:

	September 30 2020	December 31 2019
Financing receivables:		
Investment in sales-type/finance leases	**$940**	$1,029
Notes	**423**	443
Total financing receivables	**1,363**	1,472
Operating lease equipment, at cost, less accumulated depreciation of $265 and $235	**764**	834
Gross customer financing	**2,127**	2,306
Less allowance for losses on receivables	**(17)**	(8)
Total	**$2,110**	$2,298

We acquire aircraft to be leased to customers through trades, lease returns, purchases in the secondary market, and new aircraft transferred from our BCA segment. Leasing arrangements typically range in terms from 1 to 12 years and may include options to extend or terminate the lease. Certain leases include provisions to allow the lessee to purchase the underlying aircraft at a specified price. A minority of leases contain variable lease payments based on actual aircraft usage and are paid in arrears.

We determine a receivable is impaired when, based on current information and events, it is probable that we will be unable to collect amounts due according to the original contractual terms. At September 30,

2020 and December 31, 2019, we individually evaluated for impairment customer financing receivables of $392 and $400, of which $381 and $388 were determined to be impaired. We recorded no allowance for losses on these impaired receivables as the collateral values exceeded the carrying values of the receivables.

We determine a receivable is past due when cash has not been received upon the due date specified in the contract. There were no past due customer financing receivables as of September 30, 2020.

We evaluate the collectability of customer financing receivables at commencement and on a recurring basis. If a customer financing receivable is deemed uncollectable, the customer is categorized as non-accrual status. When a customer is in non-accrual status at commencement, revenue is deferred until substantially all cash has been received or the customer is removed from non-accrual status. If a customer status changes to non-accrual after commencement and sufficient collateral is available, we recognize contractual interest income as payments are received to the extent payments exceed past due principal payments. If there is not sufficient collateral, then revenue is not recognized until payments exceed the principal balance. Receivables in non-accrual status as of September 30, 2020 and December 31, 2019 were $381 and $388. Interest income received for the nine and three months ended September 30, 2020 was $26 and $5.

The adequacy of the allowance for losses is assessed quarterly. Four primary factors influencing the level of our allowance for losses on customer financing receivables are customer credit ratings, default rates, expected loss rate and collateral values, which may be adversely affected by impacts that COVID-19 has on our customers. We assign internal credit ratings for all customers and determine the creditworthiness of each customer based upon publicly available information and information obtained directly from our customers. Our rating categories are comparable to those used by the major credit rating agencies.

Our financing receivable balances at September 30, 2020 by internal credit rating category and year of origination consisted of the following:

Rating categories	Current	2019	2018	2017	2016	Prior	Total
BBB						$353	$353
BB	$100	$50	$16			148	314
B				$53		174	227
CCC		35		244	$177	13	469
Total carrying value of financing receivables	$100	$85	$16	$297	$177	$688	$1,363

At September 30, 2020, our allowance related to receivables with ratings of CCC, B, BB, and BBB. We applied default rates that averaged 26%, 7.9%, 3.1%, and 0.2%, respectively, to the exposure associated with those receivables.

Customer Financing Exposure

Customer financing is collateralized by security in the related asset. The value of the collateral is closely tied to commercial airline performance and overall market conditions and may be subject to reduced valuation with market decline. Certain collateral values are being adversely impacted by the changes in market conditions driven by the COVID-19 pandemic. Declines in collateral values could result in asset impairments, reduced finance lease income, and an increase in the allowance for losses. Our customer financing collateral is concentrated in out-of-production aircraft and 747-8 aircraft. Generally, out-of-production aircraft have experienced greater collateral value declines than in-production aircraft.

The majority of customer financing carrying values are concentrated in the following aircraft models:

	September 30 2020	December 31 2019
717 Aircraft ($104 and $124 accounted for as operating leases)	**$658**	$736
747-8 Aircraft ($123 and $130 accounted for as operating leases)	**482**	475
737 Aircraft ($220 and $240 accounted for as operating leases)	**242**	263
777 Aircraft ($230 and $236 accounted for as operating leases)	**232**	240
MD-80 Aircraft (accounted for as sales-type finance leases)	**174**	186
757 Aircraft ($14 and $22 accounted for as operating leases)	**162**	182
747-400 Aircraft ($27 and $31 accounted for as operating leases)	**80**	90

Lease income recorded in Revenue on the Condensed Consolidated Statements of Operations for the nine months ended September 30, 2020 and 2019 included $44 and $47 from sales-type/finance leases, and $99 and $105 from operating leases, of which $6 and $14 related to variable operating lease payments. Lease income recorded in Revenue on the Condensed Consolidated Statements of Operations for the three months ended September 30, 2020 and 2019 included $15 and $15 from sales-type/finance leases, and $37 and $34 from operating leases, of which $2 and $6 related to variable operating lease payments.

Note 9 – Investments

Our investments, which are recorded in Short-term and other investments or Investments, consisted of the following:

	September 30 2020	December 31 2019
Equity method investments [1]	**$981**	$1,031
Time deposits	**15,868**	50
Available for sale debt instruments	**596**	405
Equity and other investments	**76**	65
Restricted cash & cash equivalents[2]	**83**	86
Total	**$17,604**	$1,637

(1) Dividends received were $58 and $5 for the nine and three months ended September 30, 2020 and $153 and $60 during the same periods in the prior year.

(2) Reflects amounts restricted in support of our workers' compensation programs, employee benefit programs, and insurance premiums.

Allowance for losses on available for sale debt instruments are assessed quarterly. All instruments are considered investment grade and, as such, we have not recognized an allowance for credit losses as of September 30, 2020.

Note 10 – Commitments and Contingencies

737 MAX Grounding and COVID-19 Impacts

On March 13, 2019, the Federal Aviation Administration (FAA) issued an order to suspend operations of all 737 MAX aircraft in the U.S. and by U.S. aircraft operators following two fatal 737 MAX accidents. Non-U.S. civil aviation authorities have issued directives to the same effect. Deliveries of the 737 MAX have been suspended until clearance is granted by the appropriate regulatory authorities. In addition, multiple legal actions have been filed against us as a result of the accidents. We also are fully cooperating with U.S. government investigations related to the accidents and the 737 MAX program, including investigations by the U.S. Department of Justice and the Securities and Exchange Commission, the outcome of which may be material. We cannot reasonably estimate a range of loss, if any, not covered by

available insurance that may result given the current status of the lawsuits, investigations and inquiries related to the 737 MAX.

We have developed software and pilot training updates for the 737 MAX. We have assumed that computer and simulator training will be required and as a result, we have provisioned for certain training costs. During the week of June 29, 2020, the FAA completed flight tests of the updated aircraft, and Transport Canada and the European Union Aviation Safety Agency (EASA) conducted their own series of flight tests in the third quarter of 2020. In addition, the FAA initiated a 45-day public comment period for its notice of proposed rulemaking relative to 737 MAX certification, which ended during the third quarter. On October 6, 2020, the FAA posted the draft Flight Standardization Board (FSB) report on proposed pilot training, which will be subject to public comment until November 2, 2020. The FSB report incorporates the recommendations of the Joint Operations Evaluation Board (JOEB), which contains representatives from civil aviation authorities in the U.S., Canada, Brazil and the European Union. We continue to work with the FAA and non-U.S. civil aviation authorities to complete remaining steps toward certification and readiness for return to service.

Prior to the grounding, the 737 production rate was 52 per month, and we had planned to increase the rate to 57 per month during 2019. Beginning in the second quarter of 2019, we reduced the production rate to 42 per month. We continued to produce at a rate of 42 per month through December 2019. We temporarily suspended 737 MAX production beginning in January 2020. During the first quarter of 2020, we completed airplanes that were already in process at the end of the fourth quarter of 2019. In March 2020, we announced a temporary suspension of production operations in the Puget Sound area as a result of the COVID-19 pandemic. Production operations in Puget Sound resumed during the week of April 20, 2020, at which point the 737 team resumed preparations for restarting 737 MAX production. We resumed early stages of 737 MAX production in May 2020 and expect to continue to produce at low rates for the remainder of 2020. We have approximately 450 airplanes in inventory as of September 30, 2020.

The COVID-19 pandemic has significantly impacted air travel and reduced near-term demand, resulting in lower production and delivery rate assumptions. During the first quarter of 2020, we lowered our production rate assumptions in response to COVID-19 impacts to expected demand. During the second quarter of 2020, we further delayed our production rate ramp assumptions and now expect to gradually increase the production rate to 31 by the beginning of 2022. We expect further gradual production rate increases in subsequent periods based on market demand. We have assumed that the timing of regulatory approvals will enable 737 MAX deliveries to resume during the fourth quarter of 2020. A number of customers have requested to defer deliveries or to cancel orders for 737 MAX aircraft, and we are remarketing and/or delaying deliveries of certain aircraft included within inventory. We now expect to deliver about half of the approximately 450 737 MAX airplanes in inventory by the end of 2021. The ongoing impacts of COVID-19 have created significant uncertainty around the timing of future deliveries. There is also risk that we will have to remarket additional aircraft and/or that the costs associated with remarketing and/or reconfiguring aircraft will increase, which may reduce revenue and earnings in future periods when deliveries resume.

During 2019, the cumulative impacts of changes to assumptions regarding timing of return to service and timing of planned production rates and deliveries increased the estimated costs to produce and deliver the 3,100 undelivered aircraft then included in the accounting quantity by approximately $6.3 billion. During 2020, additional reductions in planned production rates further increased the estimated costs to produce and deliver aircraft included in the accounting quantity, but were partially offset by headcount and other cost reductions. These costs will result in lower 737 margins in future periods after deliveries resume.

During the first quarter of 2020, we reduced the number of aircraft included in the accounting quantity by 400 units as a result of reductions to planned production rates due to COVID-19 driven market uncertainties. The accounting quantity was unchanged during the second and third quarters. As we continue to produce at abnormally low production rates in 2020 and 2021, we expect to incur approximately $5 billion of abnormal production costs that are being expensed as incurred. The slowdown in the planned production rate ramp-up increased expected abnormal costs however this increase was

offset by adjustments to the determination of the normal production level due to COVID-19 impacts on customer demand, as well as cost reduction activities, including significant reductions in employment levels. We expensed $590 and $2,099 of abnormal production costs during the three and nine months ended September 30, 2020.

We have also recorded additional expenses of $239 as a result of the 737 MAX grounding in the first nine months of 2020. These expenses include costs related to storage, pilot training and software updates.

The following table summarizes changes in the 737 MAX customer concessions and other considerations liability during 2020.

	2020
Beginning balance – January 1	**$7,389**
Reductions for payments made	**(1,695)**
Reductions for concessions and other in-kind considerations	**(83)**
Changes in estimates	**370**
Ending balance – September 30	**$5,981**

We are working with our customers to minimize the impact to their operations from grounded and undelivered aircraft. We continue to reassess the liability for estimated potential concessions and other considerations to customers on a quarterly basis. This reassessment includes updating estimates to reflect revisions to return to service, delivery and production rate assumptions driven by timing of regulatory approvals, as well as latest information based on engagements with 737 MAX customers. The liability represents our current best estimate of future concessions and other considerations to customers, and is necessarily based on a series of assumptions. It is subject to change in future quarters as negotiations with customers mature and timing and conditions of return to service are better understood. The liability balance of $6.0 billion at September 30, 2020 includes $1.6 billion expected to be liquidated by lower customer delivery payments, $0.8 billion expected to be paid in cash and $0.2 billion in other concessions. Of the cash payments to customers, we expect to pay $0.2 billion in 2020 and $0.4 billion in 2021. The type of consideration to be provided for the remaining $3.4 billion will depend on the outcomes of negotiations with customers.

The FAA and other non-U.S. civil aviation authorities will determine the timing and conditions of return to service. Our assumptions reflect our current best estimate, but actual timing and conditions of return to service and resumption of deliveries could differ from this estimate, the effect of which could be material. We are unable at this time to reasonably estimate potential future additional financial impacts or a range of loss, if any, due to continued uncertainties related to the timing and conditions of return to service, uncertainties related to the impacts of COVID-19 on our operations, supply chain and customers, future changes to the production rate, supply chain impacts, and/or the results of negotiations with particular customers. Any such impacts, including any changes in our estimates, could have a material adverse effect on our financial position, results of operations, and/or cash flows. For example, we expect that, in the event that we are unable to resume aircraft deliveries consistent with our assumptions, the continued absence of revenue, earnings, and cash flows associated with 737 MAX deliveries would continue to have a material impact on our operating results. In the event that future production rate increases occur at a slower rate or take longer than we are currently assuming, we expect that the growth in inventory and other cash flow impacts associated with production would decrease. However, while any prolonged production suspension or delays in planned production rate increases could mitigate the impact on our liquidity, it could significantly increase the overall expected costs to produce aircraft included in the accounting quantity, which would reduce 737 program margins and/or increase abnormal production costs in the future.

Commercial air traffic has fallen dramatically due to the COVID-19 pandemic. While this trend has impacted passenger traffic most severely, near-term cargo traffic has also fallen significantly due to the global economic downturn and the reduction in cargo capacity on passenger airplanes. Airlines have significantly reduced their capacity, and many could implement further reductions in the near future. Many airlines are also implementing significant reductions in staffing. These capacity changes are causing, and

are expected to continue to cause, negative impacts to our customers' revenue, earnings, and cash flow, and in some cases may threaten the future viability of some of our customers, potentially causing defaults within our customer financing portfolio and/or requiring us to remarket aircraft that have already been produced and/or are currently in backlog. If 737 MAX aircraft remain grounded for an extended period of time, we may experience additional reductions to backlog and/or significant order cancellations. Additionally, we may experience fewer new orders and increased cancellations across all of our commercial airplane programs as a result of the COVID-19 pandemic and associated impacts on demand. Our customers may also lack sufficient liquidity to purchase new aircraft due to impacts from the pandemic. We are also observing a significant increase in the number of requests for payment deferrals, contract modifications, lease restructurings and similar actions, and these trends may lead to additional earnings charges, impairments and other adverse financial impacts in our business over time. In addition, to the extent that customers have valid rights to cancel undelivered aircraft, we may be required to refund pre-delivery payments, putting additional constraints on our liquidity. There is risk that the industry implements longer-term strategies involving reduced capacity, shifting route patterns, and mitigation strategies related to impacts from COVID-19 and the risk of future public health crises. In addition, airlines may experience reduced demand due to reluctance by the flying public to travel.

As a result, there is significant uncertainty with respect to when commercial air traffic levels will begin to recover, and whether and at what point capacity will return to and/or exceed pre-COVID-19 levels. The COVID-19 pandemic also has increased, and its aftermath is also expected to continue to increase, uncertainty with respect to global trade volumes, putting significant negative pressure on cargo traffic. Any of these factors would have a significant impact on the demand for both single-aisle and wide-body commercial aircraft, as well as for the services we provide to commercial airlines. In addition, a lengthy period of reduced industry-wide demand for commercial aircraft would put additional pressure on our suppliers, resulting in increased procurement costs and/or additional supply chain disruption. To the extent that the COVID-19 pandemic or its aftermath further impacts demand for our products and services or impairs the viability of some of our customers and/or suppliers, our financial condition, results of operations, and cash flows could be adversely affected, and those impacts could be material.

Environmental

The following table summarizes environmental remediation activity during the nine months ended September 30, 2020 and 2019.

	2020	2019
Beginning balance – January 1	**$570**	$555
Reductions for payments made	**(26)**	(34)
Changes in estimates	**27**	61
Ending balance – September 30	**$571**	$582

The liabilities recorded represent our best estimate or the low end of a range of reasonably possible costs expected to be incurred to remediate sites, including operation and maintenance over periods of up to 30 years. It is reasonably possible that we may incur charges that exceed these recorded amounts because of regulatory agency orders and directives, changes in laws and/or regulations, higher than expected costs and/or the discovery of new or additional contamination. As part of our estimating process, we develop a range of reasonably possible alternate scenarios that includes the high end of a range of reasonably possible cost estimates for all remediation sites for which we have sufficient information based on our experience and existing laws and regulations. There are some potential remediation obligations where the costs of remediation cannot be reasonably estimated. At September 30, 2020 and December 31, 2019, the high end of the estimated range of reasonably possible remediation costs exceeded our recorded liabilities by $1,094 and $1,077.

Product Warranties

The following table summarizes product warranty activity recorded during the nine months ended September 30, 2020 and 2019.

	2020	2019
Beginning balance – January 1	**$1,267**	$1,127
Additions for current year deliveries	**50**	128
Reductions for payments made	**(202)**	(166)
Changes in estimates	**444**	(7)
Ending balance – September 30	**$1,559**	$1,082

The increase in the product warranty reserve during the nine months ended September 30, 2020 is primarily driven by charges related to “pickle forks” on 737NG aircraft. During 2019, we detected cracks in the "pickle forks", a frame fitting component of the structure connecting the wings to the fuselages of 737NG aircraft. We notified the FAA, which issued a directive requiring that certain 737NG airplanes be inspected. We have estimated the number of aircraft that will have to be repaired in the future and provisioned for the estimated costs of completing the repairs. We recognized charges of $135 in 2019 for current and projected future aircraft repairs. During the first quarter of 2020, we recognized additional charges of $336 based on revised engineering and fleet utilization estimates as well as updated repair cost estimates. We cannot estimate a range of reasonably possible losses, if any, in excess of amounts recognized due to the ongoing nature of the inspections and repairs and pending the completion of investigations into the cause of the condition.

Commercial Aircraft Commitments

In conjunction with signing definitive agreements for the sale of new aircraft (Sale Aircraft), we have entered into trade-in commitments with certain customers that give them the right to trade in used aircraft at a specified price upon the purchase of Sale Aircraft. The probability that trade-in commitments will be exercised is determined by using both quantitative information from valuation sources and qualitative information from other sources. The probability of exercise is assessed quarterly, or as events trigger a change, and takes into consideration the current economic and airline industry environments. Trade-in commitments, which can be terminated by mutual consent with the customer, may be exercised only during the period specified in the agreement, and require advance notice by the customer.

Trade-in commitment agreements at September 30, 2020 have expiration dates from 2020 through 2028. At September 30, 2020 and December 31, 2019 total contractual trade-in commitments were $958 and $1,407. As of September 30, 2020 and December 31, 2019, we estimated that it was probable we would be obligated to perform on certain of these commitments with net amounts payable to customers totaling $601 and $711 and the fair value of the related trade-in aircraft was $590 and $678.

Financing Commitments

Financing commitments related to aircraft on order, including options and those proposed in sales campaigns, and refinancing of delivered aircraft, totaled $12,571 and $13,377 as of September 30, 2020 and December 31, 2019. The estimated earliest potential funding dates for these commitments as of September 30, 2020 are as follows:

	Total
October through December 2020	$1,732
2021	2,323
2022	1,733
2023	1,567
2024	1,659
Thereafter	3,557
	$12,571

As of September 30, 2020, all of these financing commitments relate to customers we believe have less than investment-grade credit. We have concluded that no reserve for future potential losses is required for these financing commitments based upon the terms, such as collateralization and interest rates, under which funding would be provided.

Funding Commitments

We have commitments to make additional capital contributions of $243 to joint ventures over the next seven years.

Standby Letters of Credit and Surety Bonds

We have entered into standby letters of credit and surety bonds with financial institutions primarily relating to the guarantee of our future performance on certain contracts. Contingent liabilities on outstanding letters of credit agreements and surety bonds aggregated approximately $3,640 and $3,769 as of September 30, 2020 and December 31, 2019.

United States Government Defense Environment Overview

The Bipartisan Budget Act of 2019 raised the Budget Control Act limits on federal discretionary defense and non-defense spending for fiscal years 2020 and 2021 (FY20 and FY21), reducing budget uncertainty and the risk of sequestration. The consolidated appropriations acts for FY20, enacted in December 2019, provided FY20 appropriations for government departments and agencies, including the U.S. DoD, the National Aeronautics and Space Administration (NASA) and the FAA. In February 2020, the U.S. administration submitted its request for $740.5 billion in base national defense spending for FY21, congruent with the amended spending limit. The Continuing Resolution (CR), enacted on October 1, 2020, continues federal funding at FY20 appropriated levels through December 11, 2020. Congress and the President must enact either full-year FY21 appropriations bills or an additional CR to fund government departments and agencies beyond December 11, 2020 or a government shutdown could result, which may impact the Company's operations.

The enacted FY20 appropriations included funding for Boeing's major programs, such as the F/A-18 Super Hornet, F-15EX, CH-47 Chinook, AH-64 Apache, V-22 Osprey, KC-46A Tanker, P-8 Poseidon and Space Launch System. However, there continues to be uncertainty with respect to future program-level appropriations for the U.S. DoD and other government agencies, including NASA. Future budget cuts or investment priority changes, including changes associated with the authorizations and appropriations process, could result in reductions, cancellations and/or delays of existing contracts or programs. Any of these impacts could have a material effect on our results of operations, financial position and/or cash flows.

BDS Fixed-Price Development Contracts

Fixed-price development work is inherently uncertain and subject to significant variability in estimates of the cost and time required to complete the work. BDS fixed-price contracts with significant development work include Commercial Crew, KC-46A Tanker, MQ-25, T-7A Red Hawk, VC-25B, and commercial and military satellites. The operational and technical complexities of these contracts create financial risk, which could trigger termination provisions, order cancellations or other financially significant exposure. Changes to cost and revenue estimates could result in lower margins or material charges for reach-forward losses. For example, we have recorded a reach-forward loss of $1,045 on KC-46A Tanker in the nine months ended September 30, 2020. The KC-46A Tanker reach-forward loss in the first quarter of 2020 reflects $551 of costs associated with the agreement signed in April 2020 with the U.S. Air Force (USAF) to develop and integrate a new Remote Vision System, and the remaining costs reflect productivity inefficiencies and COVID-19 related factory disruption. Moreover, our fixed-price development programs remain subject to additional reach-forward losses if we experience further production, technical or quality issues, schedule delays, or increased costs.

KC-46A Tanker

In 2011, we were awarded a contract from the U.S. Air Force to design, develop, manufacture and deliver four next generation aerial refueling tankers. This Engineering, Manufacturing and Development (EMD) contract is a fixed-price incentive fee contract and involves highly complex designs and systems integration. Since 2016, the USAF has authorized five low rate initial production (LRIP) lots for a total of 67 aircraft. The EMD contract and authorized LRIP lots are valued at approximately $15 billion.

At September 30, 2020, we had approximately $420 of capitalized precontract costs and $982 of potential termination liabilities to suppliers.

Recoverable Costs on Government Contracts

Our final incurred costs for each year are subject to audit and review for allowability by the U.S. government, which can result in payment demands related to costs they believe should be disallowed. We work with the U.S. government to assess the merits of claims and where appropriate reserve for amounts disputed. If we are unable to satisfactorily resolve disputed costs, we could be required to record an earnings charge and/or provide refunds to the U.S. government.

Severance

The following table summarizes changes in the severance liability during 2020:

	2020
Initial liability recorded in the second quarter of 2020	**$652**
Reductions for payments made	**(395)**
Changes in estimates	**328**
Ending balance – September 30	**$585**

During 2020, the Company recorded severance costs for approximately 26,000 employees expected to leave the Company through a combination of voluntary and involuntary terminations. The severance packages are consistent with the Company's ongoing compensation and benefits plans. As of September 30, 2020, approximately half of the 26,000 employees have left the Company, and the remainder are expected to leave in 2020 and 2021.

Note 11 – Arrangements with Off-Balance Sheet Risk

We enter into arrangements with off-balance sheet risk in the normal course of business, primarily in the form of guarantees.

The following table provides quantitative data regarding our third party guarantees. The maximum potential payments represent a "worst-case scenario," and do not necessarily reflect amounts that we expect to pay. Estimated proceeds from collateral and recourse represent the anticipated values of assets we could liquidate or receive from other parties to offset our payments under guarantees. The carrying amount of liabilities represents the amount included in Accrued liabilities.

	Maximum Potential Payments		Estimated Proceeds from Collateral/Recourse		Carrying Amount of Liabilities	
	September 30 2020	December 31 2019	**September 30 2020**	December 31 2019	**September 30 2020**	December 31 2019
Contingent repurchase commitments	**$1,480**	$1,570	**$1,480**	$1,570		
Indemnifications to ULA:						
Contributed Delta inventory	**30**	30				
Inventory supply agreement	**34**	34				
Questioned costs		317				$48
Credit guarantees	**90**	92	**33**	36	**$24**	16

Contingent Repurchase Commitments The repurchase price specified in contingent repurchase commitments is generally lower than the expected fair value at the specified repurchase date. Estimated proceeds from collateral/recourse in the table above represent the lower of the contracted repurchase price or the expected fair value of each aircraft at the specified repurchase date.

Indemnifications to ULA During the first quarter of 2020, the USAF and ULA reached a settlement regarding previously questioned deferred support and deferred production costs. As part of the settlement the USAF agreed to reimburse ULA for $307 of those costs, which was received by ULA in the second quarter. The settlement substantially retires our indemnification risks to ULA.

Other Indemnifications In conjunction with our sales of Electron Dynamic Devices, Inc. and Rocketdyne Propulsion and Power businesses and our BCA facilities in Wichita, Kansas and Tulsa and McAlester, Oklahoma, we agreed to indemnify, for an indefinite period, the buyers for costs relating to pre-closing environmental conditions and certain other items. We are unable to assess the potential number of future claims that may be asserted under these indemnifications, nor the amounts thereof (if any). As a result, we cannot estimate the maximum potential amount of future payments under these indemnities and therefore, no liability has been recorded. To the extent that claims have been made under these indemnities and/or are probable and reasonably estimable, liabilities associated with these indemnities are included in the environmental liability disclosure in Note 10.

Credit Guarantees We have issued credit guarantees where we are obligated to make payments to a guaranteed party in the event that the original lessee or debtor does not make payments or perform certain specified services. Generally, these guarantees have been extended on behalf of guaranteed parties with less than investment-grade credit and are collateralized by certain assets. We record a liability for the fair value of guarantees and the expected contingent loss amount, which is reviewed quarterly. Current outstanding credit guarantees expire through 2036.

Note 12 – Debt

In the first quarter of 2020, we entered into a $13,825, two-year delayed draw term loan facility, which includes additional commitments made subsequent to the initial closing date. As of September 30, 2020, we have fully drawn on the $13,825 delayed draw term loan facility, with February 6, 2022 as the final maturity date. Borrowings outstanding bear interest at the Eurodollar rate (determined in accordance with the delayed draw term loan facility agreement) plus between 0.75% and 1.25%, depending on our credit rating.

In the second quarter of 2020, we issued $25,000 of fixed rate senior notes consisting of $3,000 due May 1, 2023 that bear an annual interest rate of 4.508%, $3,500 due May 1, 2025 that bear an annual interest rate of 4.875%, $2,000 due May 1, 2027 that bear an annual interest rate of 5.04%, $4,500 due May 1, 2030 that bear an annual interest rate of 5.15%, $3,000 due May 1, 2040 that bear an annual interest rate of 5.705%, $5,500 due May 1, 2050 that bear an annual interest rate of 5.805%, and $3,500 due May 1, 2060 that bear an annual interest rate of 5.93%. The notes are unsecured senior obligations and rank equally in right of payment with our existing and future unsecured and unsubordinated indebtedness. The net proceeds of the issuance totaled $24,802, after deducting underwriting discounts, commissions, and offering expenses.

Note 13 – Postretirement Plans

The components of net periodic benefit (income)/cost were as follows:

	Nine months ended September 30		**Three months ended September 30**	
Pension Plans	**2020**	2019	**2020**	2019
Service cost	**$2**	$2	**$1**	
Interest cost	**1,841**	2,193	**613**	731
Expected return on plan assets	**(2,816)**	(2,896)	**(938)**	(966)
Amortization of prior service credits	**(60)**	(59)	**(20)**	(19)
Recognized net actuarial loss	**774**	482	**258**	161
Settlement/curtailment/other losses	**6**		**3**	
Net periodic benefit income	**($253)**	($278)	**($83)**	($93)
Net periodic benefit cost included in (Loss)/earnings from operations	**$2**	$234	**$1**	$76
Net periodic benefit income included in Other income, net	**(255)**	(280)	**(84)**	(93)
Net periodic benefit income included in (Loss)/earnings before income taxes	**($253)**	($46)	**($83)**	($17)

	Nine months ended September 30		**Three months ended September 30**	
Other Postretirement Plans	**2020**	2019	**2020**	2019
Service cost	**$65**	$58	**$22**	$19
Interest cost	**107**	147	**35**	49
Expected return on plan assets	**(6)**	(6)	**(1)**	(2)
Amortization of prior service credits	**(29)**	(26)	**(12)**	(8)
Recognized net actuarial gain	**(33)**	(35)	**(10)**	(12)
Settlement/curtailment/other losses	**(2)**		**(2)**	
Net periodic benefit cost	**$102**	$138	**$32**	$46
Net periodic benefit cost included in (Loss)/earnings from operations	**$67**	$66	**$23**	$21
Net periodic benefit cost included in Other income, net	**37**	80	**10**	27
Net periodic benefit cost included in (Loss)/earnings before income taxes	**$104**	$146	**$33**	$48

We plan to make contributions to our pension plans during the fourth quarter of $3,000 in Boeing common stock.

Note 14 – Share-Based Compensation and Other Compensation Arrangements

Restricted Stock Units

On February 24, 2020, we granted to our executives 325,108 restricted stock units (RSUs) as part of our long-term incentive program with a grant date fair value of $319.04 per unit. The RSUs granted under this program will vest and settle in common stock (on a one-for-one basis) on the third anniversary of the grant date.

Performance-Based Restricted Stock Units

On February 24, 2020, we granted to our executives 290,202 performance-based restricted stock units (PBRSUs) as part of our long-term incentive program with a grant date fair value of $357.38 per unit. Compensation expense for the award is recognized over the three-year performance period based upon the grant date fair value estimated using a Monte-Carlo simulation model. The model used the following assumptions: expected volatility of 27.04% based upon historical stock volatility, a risk-free interest rate of 1.21%, and no expected dividend yield because the units earn dividend equivalents.

Performance Awards

On February 28, 2020, we granted to our executives performance awards as part of our long-term incentive program with a payout based on the achievement of financial goals for the three-year period ending December 31, 2022. At September 30, 2020, the minimum payout amount is $0 and the maximum amount we could be required to pay out is $297.

Note 15 – Shareholders' Equity

Accumulated Other Comprehensive Loss

Changes in Accumulated other comprehensive loss (AOCI) by component for the nine and three months ended September 30, 2020 and 2019 were as follows:

	Currency Translation Adjustments	Unrealized Gains and Losses on Certain Investments	Unrealized Gains and Losses on Derivative Instruments	Defined Benefit Pension Plans & Other Postretirement Benefits	Total [1]
Balance at January 1, 2019	($101)		($62)	($14,920)	($15,083)
Other comprehensive (loss)/income before reclassifications	(61)	$1	(106)	17	(149)
Amounts reclassified from AOCI			22	283 [2]	305
Net current period Other comprehensive (loss)/income	(61)	1	(84)	300	156
Balance at September 30, 2019	($162)	$1	($146)	($14,620)	($14,927)
Balance at January 1, 2020	**($128)**	**$1**	**($84)**	**($15,942)**	**($16,153)**
Other comprehensive (loss)/income before reclassifications	**15**		**(107)**	**(52)**	**(144)**
Amounts reclassified from AOCI			**20**	**498 [2]**	**518**
Net current period Other comprehensive (loss)/income	**15**		**(87)**	**446**	**374**
Balance at September 30, 2020	**($113)**	**$1**	**($171)**	**($15,496)**	**($15,779)**
Balance at June 30, 2019	($103)	$1	($82)	($14,724)	($14,908)
Other comprehensive (loss)/income before reclassifications	(59)		(89)	9	(139)
Amounts reclassified from AOCI			25	95 [2]	120
Net current period Other comprehensive (loss)/income	(59)		(64)	104	(19)
Balance at September 30, 2019	($162)	$1	($146)	($14,620)	($14,927)
Balance at June 30, 2020	**($161)**	**$1**	**($258)**	**($15,607)**	**($16,025)**
Other comprehensive (loss)/income before reclassifications	**48**		**79**	**(40)**	**87**
Amounts reclassified from AOCI			**8**	**151 [2]**	**159**
Net current period Other comprehensive income	**48**		**87**	**111**	**246**
Balance at September 30, 2020	**($113)**	**$1**	**($171)**	**($15,496)**	**($15,779)**

[1] Net of tax.

[2] Primarily relates to amortization of actuarial losses for the nine and three months ended September 30, 2019 totaling $350 and $117 (net of tax of ($97) and ($32)) and for the nine and three months ended September 30, 2020 totaling $562 and $172 (net of tax of ($179) and ($76)). These are included in the net periodic pension cost.

Note 16 – Derivative Financial Instruments

Cash Flow Hedges

Our cash flow hedges include foreign currency forward contracts, commodity swaps and commodity purchase contracts. We use foreign currency forward contracts to manage currency risk associated with certain transactions, specifically forecasted sales and purchases made in foreign currencies. Our foreign currency contracts hedge forecasted transactions through 2025. We use commodity derivatives, such as fixed-price purchase commitments and swaps to hedge against potentially unfavorable price changes for items used in production. Our commodity contracts hedge forecasted transactions through 2029.

We continue to monitor the effects of the COVID-19 pandemic on our cash flow hedges, including reductions in our forecasted purchases of certain commodities. As of September 30, 2020, the impact of the COVID-19 pandemic on our cash flow hedges was not significant.

Derivative Instruments Not Receiving Hedge Accounting Treatment

We have entered into agreements to purchase and sell aluminum to address long-term strategic sourcing objectives and non-U.S. business requirements. These agreements are derivative instruments for accounting purposes. The quantities of aluminum in these agreements offset and are priced at prevailing market prices. We also hold certain foreign currency forward contracts and commodity swaps which do not qualify for hedge accounting treatment.

Notional Amounts and Fair Values

The notional amounts and fair values of derivative instruments in the Condensed Consolidated Statements of Financial Position were as follows:

	Notional amounts [1]		Other assets		Accrued liabilities	
	September 30 2020	December 31 2019	**September 30 2020**	December 31 2019	**September 30 2020**	December 31 2019
Derivatives designated as hedging instruments:						
Foreign exchange contracts	**$3,022**	$2,590	**$15**	$29	**($94)**	($60)
Commodity contracts	**354**	645	**3**	4	**(81)**	(72)
Derivatives not receiving hedge accounting treatment:						
Foreign exchange contracts	**641**	285	**16**	1	**(9)**	(6)
Commodity contracts	**927**	1,644			**(16)**	
Total derivatives	**$4,944**	$5,164	**$34**	$34	**($200)**	($138)
Netting arrangements			**(17)**	(20)	**17**	20
Net recorded balance			**$17**	$14	**($183)**	($118)

[1] Notional amounts represent the gross contract/notional amount of the derivatives outstanding.

Gains/(losses) associated with our hedging transactions and forward points recognized in Other comprehensive income are presented in the following table:

	Nine months ended September 30		**Three months ended September 30**	
	2020	2019	**2020**	2019
Recognized in Other comprehensive income, net of taxes:				
Foreign exchange contracts	**($58)**	($6)	**$54**	($34)
Commodity contracts	**(49)**	(78)	**25**	(30)

Gains/(losses) associated with our hedging transactions and forward points reclassified from AOCI to earnings are presented in the following table:

	Nine months ended September 30		Three months ended September 30	
	2020	2019	**2020**	2019
Foreign exchange contracts				
Revenues	**($2)**		**($1)**	($6)
Costs and expenses	**(12)**	(21)	**(6)**	(9)
General and administrative	**(5)**	(9)		(18)
Commodity contracts				
Costs and expenses	**(6)**	1	**(3)**	
General and administrative expense	**(1)**	1		1

Gains/(losses) related to undesignated derivatives on foreign exchange and commodity cash flow hedging transactions recognized in Other income, net were gains of $11 and $5 for the nine and three months ended September 30, 2020 and gains of $1 and losses of $1 for the nine and three months ended September 30, 2019.

Based on our portfolio of cash flow hedges, we expect to reclassify losses of $21 (pre-tax) out of Accumulated other comprehensive loss into earnings during the next 12 months.

We have derivative instruments with credit-risk-related contingent features. For foreign exchange and commodity contracts with original maturities of at least five years, our derivative counterparties could require settlement if we default on our five-year credit facility. For certain commodity contracts, our counterparties could require collateral posted in an amount determined by our credit ratings. The fair value of foreign exchange and commodity contracts that have credit-risk-related contingent features that are in a net liability position at September 30, 2020 was $26. At September 30, 2020, there was no collateral posted related to our derivatives.

Note 17 – Fair Value Measurements

The fair value hierarchy has three levels based on the reliability of the inputs used to determine fair value. Level 1 refers to fair values determined based on quoted prices in active markets for identical assets. Level 2 refers to fair values estimated using significant other observable inputs and Level 3 includes fair values estimated using significant unobservable inputs. The following table presents our assets and liabilities that are measured at fair value on a recurring basis and are categorized using the fair value hierarchy.

	September 30, 2020			December 31, 2019		
	Total	**Level 1**	**Level 2**	Total	Level 1	Level 2
Assets						
Money market funds	**$4,018**	**$4,018**		$2,562	$2,562	
Available-for-sale debt investments:						
Commercial paper	**142**		**$142**	108		$108
Corporate notes	**341**		**341**	242		242
U.S. government agencies	**113**		**113**	55	55	
Other equity investments	**45**	**45**		33	33	
Derivatives	**17**		**17**	14		14
Total assets	**$4,676**	**$4,063**	**$613**	$3,014	$2,650	$364
Liabilities						
Derivatives	**($183)**		**($183)**	($118)		($118)
Total liabilities	**($183)**		**($183)**	($118)		($118)

Money market funds, available-for-sale debt investments and equity securities are valued using a market approach based on the quoted market prices or broker/dealer quotes of identical or comparable instruments.

Derivatives include foreign currency and commodity contracts. Our foreign currency forward contracts are valued using an income approach based on the present value of the forward rate less the contract rate multiplied by the notional amount. Commodity derivatives are valued using an income approach based on the present value of the commodity index prices less the contract rate multiplied by the notional amount.

Certain assets have been measured at fair value on a nonrecurring basis using significant unobservable inputs (Level 3). The following table presents the nonrecurring losses recognized for the nine months ended September 30 due to long-lived asset impairment and the fair value and asset classification of the related assets as of the impairment date:

	2020		2019	
	Fair Value	**Total Losses**	Fair Value	Total Losses
Customer financing assets	**$100**	**($22)**	$10	($1)
Investments	**51**	**(62)**	51	(84)
Property, plant and equipment	**81**	**(75)**	41	(4)
Other Assets and Acquired intangible assets	**199**	**(158)**	3	(17)
Total	**$431**	**($317)**	$105	($106)

Investments, Property, plant and equipment, Other assets and Acquired intangible assets were primarily valued using an income approach based on the discounted cash flows associated with the underlying assets. The fair value of the impaired customer financing assets is derived by calculating a median collateral value from a consistent group of third party aircraft value publications. The values provided by the third party aircraft publications are derived from their knowledge of market trades and other market

factors. Management reviews the publications quarterly to assess the continued appropriateness and consistency with market trends. Under certain circumstances, we adjust values based on the attributes and condition of the specific aircraft or equipment, usually when the features or use of the aircraft vary significantly from the more generic aircraft attributes covered by third party publications, or on the expected net sales price for the aircraft.

For Level 3 assets that were measured at fair value on a nonrecurring basis during the year ended September 30, 2020, the following table presents the fair value of those assets as of the measurement date, valuation techniques and related unobservable inputs of those assets.

	Fair Value	Valuation Technique(s)	Unobservable Input	Range Median or Average
Customer financing assets	$100	Market approach	Aircraft value publications	$79 - $161[1] Median $110
			Aircraft condition adjustments	($13) - $3[2] Net ($10)

[1] The range represents the sum of the highest and lowest values for all aircraft subject to fair value measurement, according to the third party aircraft valuation publications that we use in our valuation process.

[2] The negative amount represents the sum, for all aircraft subject to fair value measurement, of all downward adjustments based on consideration of individual aircraft attributes and condition. The positive amount represents the sum of all such upward adjustments.

Fair Value Disclosures

The fair values and related carrying values of financial instruments that are not required to be remeasured at fair value on the Condensed Consolidated Statements of Financial Position were as follows:

	September 30, 2020				
	Carrying Amount	**Total Fair Value**	**Level 1**	**Level 2**	**Level 3**
Assets					
Notes receivable, net	**$423**	**$470**		**$470**	
Liabilities					
Debt, excluding commercial paper and capital lease obligations	**(58,840)**	**(63,033)**		**(63,016)**	**($17)**

	December 31, 2019				
	Carrying Amount	Total Fair Value	Level 1	Level 2	Level 3
Assets					
Notes receivable, net	$443	$444		$444	
Liabilities					
Debt, excluding commercial paper and capital lease obligations	(20,964)	(23,119)		(23,081)	($38)

The fair values of notes receivable are estimated with discounted cash flow analysis using interest rates currently offered on loans with similar terms to borrowers of similar credit quality. The fair value of our debt that is traded in the secondary market is classified as Level 2 and is based on current market yields. For our debt that is not traded in the secondary market, the fair value is classified as Level 2 and is based on our indicative borrowing cost derived from dealer quotes or discounted cash flows. The fair values of our debt classified as Level 3 are based on discounted cash flow models using the implied yield from similar securities. With regard to other financial instruments with off-balance sheet risk, it is not practicable

to estimate the fair value of our indemnifications and financing commitments because the amount and timing of those arrangements are uncertain. Items not included in the above disclosures include cash, restricted cash, time deposits and other deposits, commercial paper, money market funds, Accounts receivable, Unbilled receivables, Other current assets, Accounts payable and long-term payables. The carrying values of those items, as reflected in the Condensed Consolidated Statements of Financial Position, approximate their fair value at September 30, 2020 and December 31, 2019. The fair value of assets and liabilities whose carrying value approximates fair value is determined using Level 2 inputs, with the exception of cash (Level 1).

Note 18 – Legal Proceedings

Various legal proceedings, claims and investigations related to products, contracts, employment and other matters are pending against us.

In addition, we are subject to various U.S. government inquiries and investigations from which civil, criminal or administrative proceedings could result or have resulted in the past. Such proceedings involve or could involve claims by the government for fines, penalties, compensatory and treble damages, restitution and/or forfeitures. Under government regulations, a company, or one or more of its operating divisions or subdivisions, can also be suspended or debarred from government contracts, or lose its export privileges, based on the results of investigations. Except as described below, we believe, based upon current information, that the outcome of any such legal proceeding, claim, or government dispute and investigation will not have a material effect on our financial position, results of operations, or cash flows. Where it is reasonably possible that we will incur losses in excess of recorded amounts in connection with any of the matters set forth below, we will disclose either the amount or range of reasonably possible losses in excess of such amounts or, where no such amount or range can be reasonably estimated, the reasons why no such estimate can be made.

Multiple legal actions have been filed against us as a result of the October 29, 2018 accident of Lion Air Flight 610 and the March 10, 2019 accident of Ethiopian Airlines Flight 302. Further, we are subject to, and cooperating with, ongoing governmental and regulatory investigations and inquiries relating to the accidents and the 737 MAX, including investigations by the U.S. Department of Justice and the Securities and Exchange Commission, the outcome of which may be material. We cannot reasonably estimate a range of loss, if any, not covered by available insurance that may result given the current status of the lawsuits, investigations, and inquiries related to the 737 MAX.

During the first quarter of 2019, we entered into definitive transaction documents with respect to a strategic partnership with Embraer S.A. (Embraer). The partnership contemplated the establishment of joint ventures that included the commercial aircraft and services operations of Embraer, of which we were expected to acquire an 80 percent ownership stake for $4,200, as well as a joint venture to promote and develop new markets for the C-390 Millennium.

The transaction documents permitted either party to terminate the proposed partnership beginning on April 24, 2020, provided that certain closing conditions were not met. Based on Embraer's failure to satisfy required closing conditions, we exercised our contractual termination right during the second quarter of 2020, which Embraer has disputed. We would have been required to pay a termination fee of $100 had the transaction been terminated due to a failure to obtain antitrust approvals. Because the transaction was terminated due to a failure by Embraer to meet other closing conditions, we do not expect to be required to pay a termination fee in connection with the termination of the transaction. Boeing and Embraer are arbitrating their dispute over Boeing's termination of the agreement. We cannot reasonably estimate a range of loss, if any, that may result from the arbitration.

Note 19 – Segment and Revenue Information

Effective at the beginning of 2020, certain programs were realigned between our BDS segment and Unallocated items, eliminations and other. Business segment data for 2019 has been adjusted to reflect the realignment.

Our primary profitability measurements to review a segment's operating results are Earnings from operations and operating margins. We operate in four reportable segments: BCA, BDS, BGS, and BCC. All other activities fall within Unallocated items, eliminations and other. See page 7 for the Summary of Business Segment Data, which is an integral part of this note.

BCA develops, produces and markets commercial jet aircraft principally to the commercial airline industry worldwide. Revenue on commercial aircraft contracts is recognized at the point in time when an aircraft is completed and accepted by the customer.

BDS engages in the research, development, production and modification of the following products and related services: manned and unmanned military aircraft and weapons systems, surveillance and engagement, strategic defense and intelligence systems, satellite systems and space exploration. BDS revenue is generally recognized over the contract term (over time) as costs are incurred.

BGS provides parts, maintenance, modifications, logistics support, training, data analytics and information-based services to commercial and government customers worldwide. BGS segment revenue and costs include certain services provided to other segments. Revenue on commercial spare parts contracts is recognized at the point in time when a spare part is delivered to the customer. Revenue on other contracts is generally recognized over the contract term (over time) as costs are incurred.

BCC facilitates, arranges, structures and provides selective financing solutions for our Boeing customers.

The following tables present BCA, BDS and BGS revenues from contracts with customers disaggregated in a number of ways, such as geographic location, contract type and the method of revenue recognition. We believe these best depict how the nature, amount, timing and uncertainty of our revenues and cash flows are affected by economic factors.

BCA revenues by customer location consist of the following:

(Dollars in millions)	**Nine months ended September 30**		**Three months ended September 30**	
	2020	2019	**2020**	2019
Revenue from contracts with customers:				
Europe	**$3,595**	$3,944	**$1,293**	$1,260
Asia	**1,964**	10,225	**500**	2,691
Middle East	**556**	2,926		1,121
Other	**465**	2,533	**12**	166
Total non-U.S. revenues	**6,580**	19,628	**1,805**	5,238
United States	**5,190**	10,591	**1,633**	3,004
Estimated potential concessions and other considerations to 737 MAX customers, net	**(370)**	(5,610)	**151**	
Total revenues from contracts with customers	**11,400**	24,609	**3,589**	8,242
Intersegment revenues eliminated on consolidation	**34**	184	**7**	7
Total segment revenues	**$11,434**	$24,793	**$3,596**	$8,249
Revenue recognized on fixed-price contracts	**100 %**	100 %	**100 %**	100 %
Revenue recognized at a point in time	**100 %**	100 %	**100 %**	100 %

BDS revenues on contracts with customers, based on the customer's location, consist of the following:

(Dollars in millions)	Nine months ended September 30		Three months ended September 30	
	2020	2019	**2020**	2019
Revenue from contracts with customers:				
U.S. customers	**$14,465**	$15,141	**$5,312**	$5,422
Non U.S. customers[1]	**5,013**	5,027	**1,536**	1,580
Total segment revenue from contracts with customers	**$19,478**	$20,168	**$6,848**	$7,002
Revenue recognized over time	**99 %**	98 %	**99 %**	97 %
Revenue recognized on fixed-price contracts	**68 %**	69 %	**69 %**	70 %
Revenue from the U.S. government[1]	**89 %**	89 %	**90 %**	90 %

(1) Includes revenues earned from foreign military sales through the U.S. government.

BGS revenues consist of the following:

(Dollars in millions)	Nine months ended September 30		Three months ended September 30	
	2020	2019	**2020**	2019
Revenue from contracts with customers:				
Commercial	**$5,382**	$7,621	**$1,488**	$2,510
Government	**6,241**	6,075	**2,142**	2,101
Total revenues from contracts with customers	**11,623**	13,696	**3,630**	4,611
Intersegment revenues eliminated on consolidation	**187**	124	**64**	47
Total segment revenues	**$11,810**	$13,820	**$3,694**	$4,658
Revenue recognized at a point in time	**47 %**	56 %	**42 %**	54 %
Revenue recognized on fixed-price contracts	**88 %**	89 %	**87 %**	90 %
Revenue from the U.S. government[1]	**41 %**	33 %	**45 %**	35 %

(1) Includes revenues earned from foreign military sales through the U.S. government.

Backlog

Our total backlog represents the estimated transaction prices on performance obligations to our customers for which work remains to be performed. Backlog is converted into revenue in future periods as work is performed, primarily based on the cost incurred or at delivery and acceptance of products, depending on the applicable accounting method.

Our backlog at September 30, 2020 was $393,067. We expect approximately 24% to be converted to revenue through 2021 and approximately 68% through 2024, with the remainder thereafter. There is significant uncertainty regarding the timing of when backlog will convert into revenue due to the ongoing 737 MAX grounding and COVID-19 impacts.

Unallocated Items, Eliminations and other

Unallocated items, eliminations and other include common internal services that support Boeing's global business operations, intercompany guarantees provided to BCC and eliminations of certain sales between segments. Such sales include airplanes accounted for as operating leases and considered transferred to the BCC segment. We generally allocate costs to business segments based on the U.S. federal cost accounting standards. Components of Unallocated items, eliminations and other are shown in the following table.

	Nine months ended September 30		Three months ended September 30	
	2020	2019	**2020**	2019
Share-based plans	**($80)**	($57)	**($37)**	($21)
Deferred compensation	**34**	(154)	**(39)**	(25)
Amortization of previously capitalized interest	**(69)**	(68)	**(19)**	(23)
Research and development expense, net	**(160)**	(283)	**(44)**	(100)
Customer financing impairment		(250)		
Litigation		(109)		
Eliminations and other unallocated items	**(690)**	(810)	**(175)**	(352)
Unallocated items, eliminations and other	**($965)**	($1,731)	**($314)**	($521)
Pension FAS/CAS service cost adjustment	**$773**	$823	**$260**	$274
Postretirement FAS/CAS service cost adjustment	**282**	270	**93**	90
FAS/CAS service cost adjustment	**$1,055**	$1,093	**$353**	$364

Pension and Other Postretirement Benefit Expense

Pension costs, comprising GAAP service and prior service costs, are allocated to BCA and the commercial operations at BGS. Pension costs are allocated to BDS and BGS businesses supporting government customers using U.S. Government Cost Accounting Standards (CAS), which employ different actuarial assumptions and accounting conventions than GAAP. These costs are allocable to government contracts. Other postretirement benefit costs are allocated to business segments based on CAS, which is generally based on benefits paid. FAS/CAS service cost adjustment represents the difference between the FAS pension and postretirement service costs calculated under GAAP and costs allocated to the business segments. Non-operating pension and postretirement expenses represent the components of net periodic benefit costs other than service cost. These expenses are included in Other income, net.

Assets

Segment assets are summarized in the table below:

	September 30 2020	December 31 2019
Commercial Airplanes	**$83,187**	$73,995
Defense, Space & Security	**15,723**	15,757
Global Services	**18,381**	18,605
Boeing Capital	**2,053**	2,269
Unallocated items, eliminations and other	**41,917**	22,999
Total	**$161,261**	$133,625

Assets included in Unallocated items, eliminations and other primarily consist of Cash and cash equivalents, Short-term and other investments, Deferred tax assets, capitalized interest and assets managed centrally on behalf of the four principal business segments and intercompany eliminations. From December 31, 2019 to September 30, 2020, assets in BCA increased primarily due to higher inventory balances and assets in Unallocated items, eliminations, and other increased due to higher cash and short-term investment balances from debt issued during the first half of 2020.

REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

To the Board of Directors and Shareholders of
The Boeing Company
Chicago, Illinois

Results of Review of Interim Financial Information

We have reviewed the accompanying condensed consolidated statement of financial position of The Boeing Company and subsidiaries (the “Company”) as of September 30, 2020, the related condensed consolidated statements of operations, comprehensive income, and equity for the three-month and nine-month periods ended September 30, 2020 and 2019, and of cash flows for the nine-month periods ended September 30, 2020 and 2019, and the related notes (collectively referred to as the "condensed consolidated interim financial information"). Based on our reviews, we are not aware of any material modifications that should be made to the accompanying condensed consolidated interim financial information for it to be in conformity with accounting principles generally accepted in the United States of America.

We have previously audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States) (PCAOB), the consolidated statement of financial position of the Company as of December 31, 2019, and the related consolidated statements of operations, comprehensive income, equity, and cash flows for the year then ended (not presented herein); and in our report dated January 31, 2020, we expressed an unqualified opinion on those consolidated financial statements. In our opinion, the information set forth in the accompanying condensed consolidated statement of financial position as of December 31, 2019, is fairly stated, in all material respects, in relation to the consolidated statement of financial position from which it has been derived.

Basis for Review Results

This condensed consolidated interim financial information is the responsibility of the Company's management. We are a public accounting firm registered with the PCAOB and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our reviews in accordance with standards of the PCAOB. A review of interim financial information consists principally of applying analytical procedures and making inquiries of persons responsible for financial and accounting matters. It is substantially less in scope than an audit conducted in accordance with the standards of the PCAOB, the objective of which is the expression of an opinion regarding the financial statements taken as a whole. Accordingly, we do not express such an opinion.

/s/ Deloitte & Touche LLP

Chicago, Illinois

October 28, 2020

FORWARD-LOOKING STATEMENTS

This report contains “forward-looking statements” within the meaning of the Private Securities Litigation Reform Act of 1995. Words such as “may,” “should,” “expects,” “intends,” “projects,” “plans,” “believes,” “estimates,” “targets,” “anticipates” and similar expressions generally identify these forward-looking statements. Examples of forward-looking statements include statements relating to our future financial condition and operating results, as well as any other statement that does not directly relate to any historical or current fact.

Forward-looking statements are based on expectations and assumptions that we believe to be reasonable when made, but that may not prove to be accurate. These statements are not guarantees and are subject to risks, uncertainties and changes in circumstances that are difficult to predict. Many factors could cause actual results to differ materially and adversely from these forward-looking statements. Among these factors are risks related to:

(1) the COVID-19 pandemic and related government actions, including with respect to our operations and access to suppliers, our liquidity, the health of our customers and suppliers, and future demand for our products and services;

(2) the 737 MAX, including the timing and conditions of 737 MAX regulatory approvals, lower than planned production rates and/or delivery rates, and increased considerations to customers and suppliers;

(3) general conditions in the economy and our industry, including those due to regulatory changes;

(4) our reliance on our commercial airline customers;

(5) the overall health of our aircraft production system, planned commercial aircraft production rate changes, our commercial development and derivative aircraft programs, and our aircraft being subject to stringent performance and reliability standards;

(6) changing budget and appropriation levels and acquisition priorities of the U.S. government;

(7) our dependence on U.S. government contracts;

(8) our reliance on fixed-price contracts;

(9) our reliance on cost-type contracts;

(10) uncertainties concerning contracts that include in-orbit incentive payments;

(11) our dependence on our subcontractors and suppliers as well as the availability of raw materials;

(12) changes in accounting estimates;

(13) changes in the competitive landscape in our markets;

(14) our non-U.S. operations, including sales to non-U.S. customers;

(15) threats to the security of our or our customers' information;

(16) potential adverse developments in new or pending litigation and/or government investigations;

(17) customer and aircraft concentration in our customer financing portfolio;

(18) changes in our ability to obtain debt financing on commercially reasonable terms and at competitive rates;

(19) realizing the anticipated benefits of mergers, acquisitions, joint ventures, strategic alliances or divestitures;

(20) the adequacy of our insurance coverage to cover significant risk exposures;

(21) potential business disruptions, including those related to physical security threats, information technology or cyber attacks, epidemics, sanctions or natural disasters;

(22) work stoppages or other labor disruptions;

(23) substantial pension and other postretirement benefit obligations; and

(24) potential environmental liabilities.

Additional information concerning these and other factors can be found in our filings with the Securities and Exchange Commission, including our most recent Annual Report on Form 10-K, Quarterly Reports on Form 10-Q and Current Reports on Form 8-K. Any forward-looking information speaks only as of the date on which it is made, and we assume no obligation to update or revise any forward-looking statement, whether as a result of new information, future events, or otherwise, except as required by law.

Item 2. Management's Discussion and Analysis of Financial Condition and Results of Operations

Consolidated Results of Operations and Financial Condition

Overview

The global outbreak of COVID-19 and the ongoing grounding of the 737 MAX airplane are having a significant adverse impact on our business and are expected to continue to negatively impact revenue, earnings and operating cash flow in future quarters. They are also having a significant impact on our liquidity - see Liquidity Matters in Note 1 to our Condensed Consolidated Financial Statements for a further discussion of liquidity and additional actions we are taking in response to the challenges posed by COVID-19 and the 737 MAX grounding.

The COVID-19 pandemic has caused an unprecedented shock to demand for air travel, creating a tremendous challenge for our customers, our business and the entire commercial aerospace manufacturing and services sector. The latest International Air Transport Association (IATA) forecast projects full-year passenger traffic to be down 66% this year compared to 2019 as global economic activity slows due to COVID-19 and governments severely restrict travel to contain the spread of the virus. However, the recovery remains slow and uneven as travel restrictions and varying regional travel protocols continue to impact air travel. Generally, we expect domestic travel to recover faster than international travel. As a result, we expect the narrow-body market to recover faster than the wide-body market. Also, the pace of the commercial market recovery will be heavily dependent on COVID-19 infection rates, progress on testing, government travel restrictions, and timing and availability of a vaccine.

Our customers are taking actions to combat the effects of the COVID-19 pandemic on the market by preserving liquidity. This comes in many forms such as deferrals of advances and other payments to suppliers, deferrals of deliveries, reduced spending on services, and, in some cases, cancellation of orders. We face a challenging environment in the near to medium term as airlines adjust to reduced traffic which in turn will lower demand for commercial aerospace products and services. The current environment is also affecting the financial viability of some airlines.

We currently expect it will take approximately three years for world-wide travel to return to 2019 levels and a few years beyond that for the industry to return to long-term trend growth. To balance the supply and demand given the COVID-19 shock and to preserve our long-term potential and competitiveness, we have reduced the production rates of several of our Commercial Airplanes (BCA) programs. These rate decisions are based on our ongoing assessments of the demand environment and availability of aircraft financing. There is significant uncertainty with respect to when commercial air traffic levels will recover, and whether, and at what point, capacity will return to and/or exceed pre-COVID-19 levels. We will closely monitor the key factors that affect backlog and future demand including customers' evolving fleet plans, the wide-body replacement cycle and the cargo market. We will maintain a disciplined rate management process, and make adjustments as appropriate in the future. Notwithstanding the changes we have made to production rates, risk remains that further reductions will be required. Additionally, if we are unable to make timely deliveries of the large number of aircraft in inventory as of September 30, 2020, future revenues, earnings and cash flows will be adversely impacted.

At Global Services (BGS), we are seeing a direct impact on our commercial supply chain business as fewer flights and more aircraft retirements result in a decreased demand for our parts and logistics offerings. Additionally, our commercial customers are curtailing discretionary spending, such as modifications and upgrades and focusing on required maintenance. Similar to BCA, we expect a multi-year recovery period for the commercial services business. The demand outlook for our government services business, which in 2019 accounted for just under half of BGS revenue, remains stable.

At Defense, Space & Security (BDS), we continue to see a healthy market with solid demand for our major platforms and programs both domestically and internationally. However, we have experienced near-term production impacts associated with our temporary suspension of operations at various locations earlier this year.

In March and April of 2020, we temporarily suspended operations at multiple locations including the Puget Sound area, South Carolina and Philadelphia. Operations in Puget Sound and Philadelphia resumed during the week of April 20, while operations in South Carolina resumed beginning on May 3. We have implemented procedures to promote employee safety in our facilities, including more frequent and enhanced cleaning and adjusted schedules and work flows to support physical distancing. These actions have resulted, and will continue to result, in increased operating costs. In addition, a number of our suppliers have suspended or otherwise reduced their operations, and we are experiencing some supply chain shortages. Our suppliers are also experiencing liquidity pressures and disruptions to their operations as a result of COVID-19. We also continue to have large numbers of employees working from home. These measures and disruptions have reduced overall productivity and adversely impacted our financial position, results of operations, and cash flows in 2020. We expect further adverse impacts in future quarters.

Loss/Earnings From Operations and Core Operating Loss/Earnings (Non-GAAP)

The following table summarizes key indicators of consolidated results of operations:

(Dollars in millions, except per share data)	**Nine months ended September 30**		**Three months ended September 30**	
	2020	2019	**2020**	2019
Revenues	**$42,854**	$58,648	**$14,139**	$19,980
GAAP				
(Loss)/earnings from operations	**($4,718)**	$229	**($401)**	$1,259
Operating margins	**(11.0)%**	0.4 %	**(2.8)%**	6.3 %
Effective income tax rate	**40.1 %**	(350.6)%	**49.6 %**	0.8 %
Net (loss)/earnings attributable to Boeing Shareholders	**($3,453)**	$374	**($449)**	$1,167
Diluted (loss)/earnings per share	**($6.10)**	$0.66	**($0.79)**	$2.05
Non-GAAP [1]				
Core operating (loss)/earnings	**($5,773)**	($864)	**($754)**	$895
Core operating margins	**(13.5)%**	(1.5)%	**(5.3)%**	4.5 %
Core (loss)/earnings per share	**($7.88)**	($1.13)	**($1.39)**	$1.45

[1] These measures exclude certain components of pension and other postretirement benefit expense. See page 58 for important information about these non-GAAP measures and reconciliations to the most comparable GAAP measures.

Revenues

The following table summarizes Revenues:

(Dollars in millions)	**Nine months ended September 30**		**Three months ended September 30**	
	2020	2019	**2020**	2019
Commercial Airplanes	**$11,434**	$24,793	**$3,596**	$8,249
Defense, Space & Security	**19,478**	20,168	**6,848**	7,002
Global Services	**11,810**	13,820	**3,694**	4,658
Boeing Capital	**205**	207	**71**	66
Unallocated items, eliminations and other	**(73)**	(340)	**(70)**	5
Total	**$42,854**	$58,648	**$14,139**	$19,980

Revenues for the nine months ended September 30, 2020 decreased by $15,794 million compared with the same period in 2019 primarily due to lower revenues in our commercial airplanes and commercial services businesses. Revenues for each of our segments have been adversely impacted by COVID-19. BCA revenues decreased by $13,359 million due to lower deliveries driven by the impacts of the COVID-19 pandemic and the 737 MAX grounding, offset by lower charges related to estimated potential concessions and other considerations to 737 MAX customers. BDS revenues decreased by $690 million primarily due to the impact of higher unfavorable cumulative contract catch-up adjustments largely due to the KC-46A Tanker charges in the first quarter of 2020. BGS revenues decreased by $2,010 million primarily due to lower commercial services revenue driven by impacts of the COVID-19 pandemic. The changes in Unallocated items, eliminations and other primarily reflect the timing of eliminations for intercompany aircraft deliveries, as well as reserves related to cost accounting litigation recorded in 2019. We expect the impacts of the COVID-19 pandemic to continue to significantly impact revenues in future quarters until the commercial airline industry recovers.

Revenues for the three months ended September 30, 2020 decreased by $5,841 million compared with the same period in 2019. BCA revenues decreased by $4,653 million primarily due to lower wide-body deliveries driven by the impacts of COVID-19 and 787 quality issues and associated rework. Revenues in both periods were adversely impacted by the 737 MAX grounding. BDS revenues decreased by $154 million, due to a KC-46A Tanker lot award in the third quarter of 2019, partially offset by higher fighter volume. BGS revenues decreased by $964 million due to lower commercial services revenue driven by impacts of the COVID-19 pandemic.

Loss/Earnings From Operations

The following table summarizes (Loss)/earnings from operations:

(Dollars in millions)	Nine months ended September 30		Three months ended September 30	
	2020	2019	**2020**	2019
Commercial Airplanes	**($6,199)**	($3,813)	**($1,369)**	($40)
Defense, Space & Security	**1,037**	2,581	**628**	754
Global Services	**307**	2,013	**271**	673
Boeing Capital	**47**	86	**30**	29
Segment operating (loss)/earnings	**(4,808)**	867	**(440)**	1,416
Pension FAS/CAS service cost adjustment	**773**	823	**260**	274
Postretirement FAS/CAS service cost adjustment	**282**	270	**93**	90
Unallocated items, eliminations and other	**(965)**	(1,731)	**(314)**	(521)
(Loss)/earnings from operations (GAAP)	**($4,718)**	$229	**($401)**	$1,259
FAS/CAS service cost adjustment *	**(1,055)**	(1,093)	**(353)**	(364)
Core operating (loss)/earnings (Non-GAAP) **	**($5,773)**	($864)	**($754)**	$895

* The FAS/CAS service cost adjustment represents the difference between the FAS pension and postretirement service costs calculated under GAAP and costs allocated to the business segments.

** Core operating loss is a Non-GAAP measure that excludes the FAS/CAS service cost adjustment. See page 58.

Loss from operations for the nine months ended September 30, 2020 was $4,718 million, compared with earnings from operations of $229 million during the same period in 2019. BCA loss from operations of $6,199 million for the nine months ended September 30, 2020 primarily reflects the continued absence of MAX deliveries, lower wide-body deliveries and lower program margins resulting from the COVID-19 pandemic, abnormal production costs, 737NG frame fitting component repair costs, severance costs and 737 MAX customer considerations. BCA loss from operations of $3,813 million for the nine months ended September 30, 2019 primarily reflects the absence of 737 MAX deliveries and charges of $5,610 million for estimated 737 MAX customer considerations. BDS earnings decreased by $1,544 million, primarily due to charges of $1,045 million on KC-46A Tanker and $168 million on VC-25B. The lower earnings were also driven by lower gains on property sales compared to the same period in 2019 and lower equity earnings for our ULA joint venture. BGS earnings from operations decreased by $1,706 million primarily due to lower revenues, asset impairments in the second quarter of 2020 and severance costs as a result of the COVID-19 market environment. We expect the impacts of the COVID-19 pandemic to continue to reduce earnings in future quarters until the commercial airline industry recovers.

Loss from operations for the three months ended September 30, 2020 was $401 million, compared with earnings from operations of $1,259 million during the same period in 2019, primarily due to higher losses at BCA and lower earnings at BGS. BCA loss from operations increased $1,329 million primarily due to lower wide-body margins and deliveries resulting from the COVID-19 pandemic, abnormal production costs, and severance costs. BDS earnings decreased $126 million primarily due to unfavorable cumulative contract catch-up adjustments. BGS earnings decreased $402 million primarily due to lower revenues and severance costs.

Core operating loss for the nine months ended September 30, 2020 increased by $4,909 million compared with the same period in 2019. Core operating loss for the three months ended September 30, 2020 was $754 million, compared with core operating earnings of $895 million during the same period in 2019.

Unallocated Items, Eliminations and Other

The most significant items included in Unallocated items, eliminations and other are shown in the following table:

(Dollars in millions)	Nine months ended September 30		Three months ended September 30	
	2020	2019	**2020**	2019
Share-based plans	**($80)**	($57)	**($37)**	($21)
Deferred compensation	**34**	(154)	**(39)**	(25)
Amortization of previously capitalized interest	**(69)**	(68)	**(19)**	(23)
Research and development expense, net	**(160)**	(283)	**(44)**	(100)
Customer financing impairment		(250)		
Litigation		(109)		
Eliminations and other unallocated items	**(690)**	(810)	**(175)**	(352)
Unallocated items, eliminations and other	**($965)**	($1,731)	**($314)**	($521)

Deferred compensation expense decreased by $188 million and increased by $14 million for the nine and three months ended September 30, 2020 compared with the same periods in 2019 primarily driven by changes in our stock price and broad market conditions.

Research and development expense decreased by $123 million and $56 million for the nine and three months ended September 30, 2020 compared with the same periods in 2019 primarily due to decreased spending by Boeing NeXt on product development.

During the first quarter of 2019, we recorded a $250 million charge related to the impairment of lease incentives with one customer that experienced liquidity issues.

During the second quarter of 2019, we recorded a charge of $109 million related to ongoing litigation associated with recoverable costs on U.S. government contracts.

Net periodic pension benefit costs included in (Loss)/earnings from operations were as follows:

(Dollars in millions)	Nine months ended September 30		Three months ended September 30	
Pension Plans	**2020**	2019	**2020**	2019
Allocated to business segments	**($775)**	($1,057)	**($261)**	($350)
Pension FAS/CAS service cost adjustment	**773**	823	**260**	274
Net periodic benefit cost included in (Loss)/earnings from operations	**($2)**	($234)	**($1)**	($76)

The pension FAS/CAS service cost adjustment recognized in earnings/loss in 2020 is largely consistent with the same periods in the prior year. The decrease in net periodic benefit costs included in (Loss)/earnings from operations in 2020 was primarily due to prior year service cost that was included in earnings in 2019.

For discussion related to Postretirement Plans, see Note 13 to our Condensed Consolidated Financial Statements.

Other Earnings Items

(Dollars in millions)	Nine months ended September 30		Three months ended September 30	
	2020	2019	**2020**	2019
(Loss)/earnings from operations	**($4,718)**	$229	**($401)**	$1,259
Other income, net	**325**	334	**119**	121
Interest and debt expense	**(1,458)**	(480)	**(643)**	(203)
(Loss)/earnings before income taxes	**(5,851)**	83	**(925)**	1,177
Income tax benefit/(expense)	**2,349**	291	**459**	(10)
Net (loss)/earnings from continuing operations	**(3,502)**	374	**(466)**	1,167
Less: Net loss attributable to noncontrolling interest	**(49)**		**(17)**	
Net (loss)/earnings attributable to Boeing Shareholders	**($3,453)**	$374	**($449)**	$1,167

Other income, net decreased by $9 million and $2 million during the nine and three months ended September 30, 2020, primarily due to higher foreign exchange losses and lower non-operating pension income, partially offset by lower non-operating postretirement expense. Non-operating pension income was $255 million and $84 million during the nine and three months ended September 30, 2020 compared with $280 million and $93 million during the same periods in 2019. Non-operating postretirement expense was $37 million and $10 million during the nine and three months ended September 30, 2020 compared with $80 million and $27 million during the same periods in 2019.

Higher Interest and debt expense for the nine and three months ended September 30, 2020 is a result of higher debt balances.

For discussion related to Income Taxes, see Note 4 to our Condensed Consolidated Financial Statements.

Total Costs and Expenses ("Cost of Sales")

Cost of sales, for both products and services, consists primarily of raw materials, parts, sub-assemblies, labor, overhead and subcontracting costs. Our BCA segment predominantly uses program accounting to account for cost of sales. Under program accounting, cost of sales for each commercial airplane program equals the product of (i) revenue recognized in connection with customer deliveries and (ii) the estimated cost of sales percentage applicable to the total remaining program. For long-term contracts, the amount reported as cost of sales is recognized as incurred. Substantially all contracts at our BDS segment and certain contracts at our BGS segment are long-term contracts with the U.S. government and other customers that generally extend over several years. Costs on these contracts are recorded as incurred. Cost of sales for commercial spare parts is recorded at average cost.

The following table summarizes cost of sales:

(Dollars in millions)	Nine months ended September 30			Three months ended September 30		
	2020	2019	Change	**2020**	2019	Change
Cost of sales	**$42,851**	$53,385	($10,534)	**$13,105**	$16,930	($3,825)
Cost of sales as a % of Revenues	**100.0 %**	91.0 %	9.0 %	**92.7 %**	84.7 %	8.0 %

Cost of sales for the nine and three months ended September 30, 2020 decreased by $10,534 million, or 20% and by $3,825 million, or 23% compared with the same periods in 2019, primarily due to lower revenue in 2020, partially offset by higher charges in 2020 related to COVID-19 impacts, KC-46A Tanker program, abnormal production costs at BCA and severance costs. Cost of sales as a percentage of Revenues increased during the nine and three months ended September 30, 2020 compared with the

same periods in 2019 primarily due to the impacts of the 737 MAX grounding and the COVID-19 pandemic, as well as severance costs.

Research and Development

The following table summarizes our Research and development expense:

(Dollars in millions)	**Nine months ended September 30**		**Three months ended September 30**	
	2020	2019	**2020**	2019
Commercial Airplanes	**$1,107**	$1,529	**$321**	$467
Defense, Space & Security	**494**	556	**164**	182
Global Services	**110**	102	**45**	29
Other	**160**	283	**44**	100
Total	**$1,871**	$2,470	**$574**	$778

Research and development expense decreased by $599 million and $204 million during the nine and three months ended September 30, 2020 compared to the same periods in 2019, primarily due to lower spending at BCA on 777X and product development, as well as lower spending on product development at Boeing NeXt.

Backlog

(Dollars in millions)	**September 30 2020**	December 31 2019
Commercial Airplanes	**$312,684**	$376,593
Defense, Space & Security	**62,375**	63,691
Global Services	**17,464**	22,902
Unallocated items, eliminations and other	**544**	217
Total Backlog	**$393,067**	$463,403
Contractual backlog	**$368,916**	$436,473
Unobligated backlog	**24,151**	26,930
Total Backlog	**$393,067**	$463,403

Contractual backlog of unfilled orders excludes purchase options, announced orders for which definitive contracts have not been executed, and unobligated U.S. and non-U.S. government contract funding. The decrease during the nine months ended September 30, 2020 was primarily due to a reduction for orders that in our assessment no longer meet the accounting requirements of ASC 606 for inclusion in backlog, deliveries in excess of new orders, aircraft order cancellations and changes in projected price escalation. We are experiencing fewer new 737 MAX orders than we were receiving prior to the grounding. If 737 MAX aircraft remain grounded for an extended period of time, we may experience additional reductions to backlog and/or significant order cancellations. Additionally, we may experience fewer new orders and increased cancellations across all of our commercial airplane programs as a result of the COVID-19 pandemic and associated impacts on demand.

Unobligated backlog includes U.S. and non-U.S. government definitive contracts for which funding has not been authorized. The decrease during the nine months ended September 30, 2020 was primarily due to reclassifications to contractual backlog related to BGS and BDS contracts, partially offset by contract awards.

Additional Considerations

Global Trade We continually monitor the global trade environment in response to geopolitical economic developments, as well as changes in tariffs, trade agreements, or sanctions that may impact the Company.

The global economy is currently experiencing significant adverse impacts due to the COVID-19 pandemic, including a decline in overall trade in general and in aerospace in particular. There is a great deal of uncertainty regarding the duration, scale, and localization of these impacts to the global economy and governments are enacting a wide range of responses to mitigate the unfolding economic impacts. We are closely monitoring the current impact and potential future economic consequences of COVID-19 to the global economy, the aerospace sector, and our Company. These adverse economic impacts have resulted in fewer orders than previously anticipated for our commercial aircraft.

Since 2018, the U.S. and China imposed an escalating series of tariffs on each other's imports. Certain aircraft parts and components that Boeing procures are subject to these tariffs. The U.S. and China entered into a Phase I agreement in January 2020. However, implementation of this agreement is incomplete and overall diplomatic relations between the U.S. and China have deteriorated in recent months. We continue monitoring developments for potential adverse impacts to the Company.

Beginning in June 2018, the U.S. Government has imposed tariffs on steel and aluminum imports. In response to these tariffs, several major U.S. trading partners have imposed, or announced their intention to impose, tariffs on U.S. goods. In May 2019, the U.S. Government, Mexico and Canada reached an agreement to end the steel and aluminum tariffs between these countries. Implementation of the U.S./Mexico/Canada Free Trade Agreement (USMCA) will also result in lower tariffs. We continue to monitor the potential for any extra costs that may result from the remaining global tariffs.

The U.S. Government continues to impose and/or consider imposing sanctions on certain businesses and individuals in Russia. Although our operations or sales in Russia have not been impacted to date, we continue to monitor additional sanctions that may be imposed by the U.S. Government and any responses from Russia that could affect our supply chain, business partners or customers.

The U.S. and European Union (EU) have been engaged in two long-running disputes at the World Trade Organization (WTO) relating to large civil aircraft. As part of those disputes, in October 2019, the WTO authorized the U.S. to impose approximately $7.50 billion in annual tariffs on EU products in connection with the EU's provision of eight instances of launch aid subsidies to Airbus. On October 13, 2020, the WTO announced that it intends to authorize the EU to impose approximately $3.99 billion in annual tariffs on U.S. products in connection with a tax incentive used by Boeing in Washington state that has since been repealed. We will monitor developments arising from ongoing discussions between trade authorities in the U.S. and EU regarding this matter, as well as assess the impact of any tariffs that the EU might impose in the future.

Segment Results of Operations and Financial Condition

Commercial Airplanes

Business Environment and Trends

See Overview to Management's Discussion and Analysis of Financial Condition and Results of Operations for a discussion of the impacts of COVID-19 on the airline industry environment.

Results of Operations

(Dollars in millions)	Nine months ended September 30		Three months ended September 30	
	2020	2019	**2020**	2019
Revenues	**$11,434**	$24,793	**$3,596**	$8,249
Loss from operations	**($6,199)**	($3,813)	**($1,369)**	($40)
Operating margins	**(54.2)%**	(15.4)%	**(38.1)%**	(0.5)%

Revenues

Revenues for the nine months ended September 30, 2020 decreased by $13,359 million compared with the same period in 2019 due to lower deliveries primarily driven by the impacts of the COVID-19 pandemic and the 737 MAX grounding. This was partially offset by lower charges related to estimated potential concessions and other considerations to 737 MAX customers of $370 million in 2020 as compared with $5,610 million for the same period in 2019.

Revenues for the three months ended September 30, 2020 decreased by $4,653 million compared with the same period in 2019 primarily due to lower wide-body deliveries driven by the impacts of the COVID-19 pandemic and 787 quality issues and associated rework. Revenues in both periods were adversely impacted by the 737 MAX grounding.

The 737 MAX grounding will continue to have a significant impact on future revenues until deliveries resume, and COVID-19 will continue to have a significant impact on future revenues until the commercial airline industry recovers.

Commercial airplane deliveries, including intercompany deliveries, were as follows:

	737	*	**747**	**767**	*	**777**	†	**787**	**Total**
Deliveries during the first nine months of 2020	12	(10)	2	20	(8)	15		49	98
Deliveries during the first nine months of 2019	118	(15)	5	32	(18)	33	(1)	113	301
Deliveries during the third quarter of 2020	3	(3)	1	6	(2)	5		13	28
Deliveries during the third quarter of 2019	5	(5)	1	10	(4)	11		35	62
Cumulative deliveries as of 9/30/2020	7,451		1,557	1,196		1,642		988	
Cumulative deliveries as of 12/31/2019	7,439		1,555	1,176		1,627		939	

* Intercompany deliveries identified by parentheses.

† Aircraft accounted for as revenues by BCA and as operating leases in consolidation identified by parentheses.

Loss From Operations

The loss from operations for the nine months ended September 30, 2020 of $6,199 million increased $2,386 million compared with the same period in 2019. The 2020 loss reflects the continued absence of 737 MAX deliveries, lower wide-body deliveries and lower program margins resulting from the COVID-19 pandemic, $2,099 million of abnormal production costs related to 737 MAX, $370 million of 737 MAX customer considerations, $270 million of abnormal production costs in the first half of 2020 from the temporary suspension of operations in response to COVID-19, $336 million related to 737NG frame fitting component repair costs and $610 million of severance costs. Lower 787 margins reflecting a reduction in the accounting quantity in the first quarter of 2020 and lower production rates also contributed to lower earnings. The 2019 loss primarily reflects the absence of 737 MAX deliveries in the second and third quarters of 2019 and charges of $5,610 million for estimated 737 MAX customer considerations.

The loss from operations for the three months ended September 30, 2020 of $1,369 million increased $1,329 million compared with the same period in 2019. The losses in both periods reflect the continued absence of MAX deliveries. The 2020 loss was also driven by lower wide-body deliveries and lower program margins due to COVID-19 impacts, $590 million of abnormal production costs related to 737 MAX, $142 million of severance costs, partially offset by a $151 million favorable change in estimated 737 MAX customer considerations.

The 737 MAX grounding and the COVID-19 pandemic will continue to have a significant adverse impact on future earnings and margins until 737 MAX and wide-body deliveries return to historic levels.

Backlog

Our total backlog represents the estimated transaction prices on unsatisfied and partially satisfied performance obligations to our customers where we believe it is probable that we will collect the consideration due and where no contingencies remain before we and the customer are required to perform. Backlog does not include prospective orders where customer controlled contingencies remain, such as the customer receiving approval from its board of directors, shareholders or government or completing financing arrangements. All such contingencies must be satisfied or have expired prior to recording a new firm order even if satisfying such conditions is highly certain. Backlog excludes options and Boeing Capital (BCC) orders. A number of our customers may have contractual remedies, including rights to reject individual airplane deliveries if the actual delivery date is significantly later than the contractual delivery date. We address customer claims and requests for other contractual relief as they arise. The value of orders in backlog is adjusted as changes to price and schedule are agreed to with customers and is reported in accordance with the requirements of Topic 606.

BCA total backlog decreased from $376,593 million as of December 31, 2019 to $312,684 million at September 30, 2020 reflecting aircraft order cancellations, a reduction for orders that in our assessment no longer meet the accounting requirements of ASC 606 for inclusion in backlog, changes in projected price escalation and deliveries in excess of new orders. Aircraft order cancellations during the nine and three months ended September 30, 2020 totaled $23,254 million and $3,499 million and primarily relate to 737 MAX aircraft. The ASC 606 adjustments for the nine and three months ended September 30, 2020 totaled $32,545 million and $8,639 million and primarily relate to 737 MAX aircraft. The ASC 606 adjustments include aircraft orders where a customer controlled contingency now exists, as well as orders where we can no longer assert that the customer is committed to perform or that it is probable that the customer will pay the full amount of consideration when it is due. If 737 MAX aircraft remain grounded for an extended period of time, we may experience additional reductions to backlog and/or significant order cancellations. Additionally, we may continue to experience fewer new orders and increased cancellations across all of our commercial airplane programs as a result the COVID-19 pandemic.

Accounting Quantity

The following table provides details of the accounting quantities and firm orders by program. Cumulative firm orders represent the cumulative number of commercial jet aircraft deliveries plus undelivered firm orders.

	Program						
As of 9/30/2020	**737**	**747***	**767**	**777**	**777X**	**787**	**†**
Program accounting quantities	**10,000**	**1,574**	**1,207**	**1,690**	**	**1,500**	
Undelivered units under firm orders	**3,403**	**11**	**83**	**44**	**309**	**475**	(27)
Cumulative firm orders	**10,854**	**1,568**	**1,279**	**1,686**	**309**	**1,463**	

As of 12/31/2019	737	747	767	777	777X	787	†
Program accounting quantities	10,400	1,574	1,195	1,690	**	1,600	
Undelivered units under firm orders	4,398	17	94	68	309	520	(29)
Cumulative firm orders	11,837	1,572	1,270	1,695	309	1,459	

† Aircraft ordered by BCC are identified in parentheses.

* At September 30, 2020, the 747 accounting quantity includes one already completed aircraft that has not been sold and is being remarketed.

** The accounting quantity for the 777X will be determined in the year of first airplane delivery.

Program Highlights

737 Program We reduced the program accounting quantity from 10,400 at December 31, 2019 to 10,000 at March 31, 2020. This reflects a slower than previously planned production rate ramp-up caused by commercial airline industry uncertainty due to the impact of COVID-19. See further discussion of the 737 MAX Grounding and COVID-19 Impacts and Product Warranties in Note 10 to our Condensed Consolidated Financial Statements.

747 Program We are currently producing at a rate of 0.5 aircraft per month. We will complete production of the 747 in 2022. We believe that ending production of the 747 will not have a material impact on our financial position, results of operations or cash flows.

767 Program The accounting quantity for the 767 program increased by 12 units during the second quarter of 2020 due to the program's normal progress of obtaining additional orders and delivering airplanes. The 767 assembly line includes the commercial program and a derivative to support the KC-46A tanker program. We are currently producing at a rate of 3 aircraft per month.

777 Program In 2013, we launched the 777X, which features a new composite wing, new engines and folding wing-tips. We have experienced issues in engine design and development on the 777X. The first flight of the 777X was completed on January 25, 2020, and first delivery is now targeted for 2022. Timing of first delivery will ultimately be influenced by certification requirements defined by regulators. The 777 and 777X programs have a combined production rate of approximately 5 per month gradually reducing to 2 per month in 2021. We expect to deliver at an average rate of approximately 2.5 per month in 2020.

Market uncertainties driven primarily by the impacts of COVID-19 are resulting in lower planned production rates and creating significant pressure on the 777X program's revenue and cost estimates. Based on our assessment of the probable range of initial accounting quantities, the 777X does not have a reach-forward loss at September 30, 2020. The level of profitability on the 777X program will be subject to a number of factors. These factors include continued market uncertainty, the impacts of COVID-19 on our productivity as well as impacts on our supply chain and customers, production rate adjustments for other commercial aircraft programs, and potential risks associated with the testing program and the timing of aircraft certification. One or more of these factors could result in a reach-forward loss on the 777X program in future periods.

787 Program During 2020, we experienced significant reductions in deliveries due to the impacts of COVID-19 on our customers as well as quality issues and associated rework. The 787 program has a large number of undelivered airplanes in inventory at September 30, 2020. Pre-COVID-19, we were producing at a rate of 14 per month and had planned to adjust the 787 production rate to 12 per month in late 2020 and to 10 per month in early 2021. Due to the impacts of COVID-19 on customer demand, we are currently producing at a rate of 10 per month and plan to reduce to 6 per month in 2021. As a result of the planned production rate changes, we reduced the accounting quantity for the 787 program by 100 units during the first quarter of 2020. The 787 program has near breakeven gross margins due to the reductions in the production rates and the reduction in the program accounting quantity. If we are required to further reduce the accounting quantity and/or production rates or experience other factors that could result in lower margins, the program could record a reach-forward loss in future periods. We made the decision during the third quarter of 2020 to consolidate 787 production in South Carolina in 2021, which did not have a significant financial impact on the program.

Additional Considerations

The development and ongoing production of commercial aircraft is extremely complex, involving extensive coordination and integration with suppliers and highly-skilled labor from employees and other partners. Meeting or exceeding our performance and reliability standards, as well as those of customers and regulators, can be costly and technologically challenging. In addition, the introduction of new aircraft and derivatives, such as the 777X, involves increased risks associated with meeting development, production and certification schedules. As a result, our ability to deliver aircraft on time, satisfy performance and reliability standards and achieve or maintain, as applicable, program profitability is subject to significant risks. Factors that could result in lower margins (or a material charge if an airplane program has or is determined to have reach-forward losses) include the following: changes to the program accounting quantity, customer and model mix, production costs and rates, changes to price escalation factors due to changes in the inflation rate or other economic indicators, performance or reliability issues involving completed aircraft, capital expenditures and other costs associated with increasing or adding new production capacity, learning curve, additional change incorporation, achieving anticipated cost reductions, flight test and certification schedules, costs, schedule and demand for new airplanes and derivatives and status of customer claims, supplier claims or assertions and other contractual negotiations. While we believe the cost and revenue estimates incorporated in the consolidated financial statements are appropriate, the technical complexity of our airplane programs creates financial risk as additional completion costs may become necessary or scheduled delivery dates could be extended, which could trigger termination provisions, order cancellations or other financially significant exposure.

Defense, Space & Security

Business Environment and Trends

United States Government Defense Environment Overview

The Bipartisan Budget Act of 2019 raised the Budget Control Act limits on federal discretionary defense and non-defense spending for fiscal years 2020 and 2021 (FY20 and FY21), reducing budget uncertainty and the risk of sequestration. The consolidated appropriations acts for FY20, enacted in December 2019, provided FY20 appropriations for government departments and agencies, including the United States Department of Defense (U.S. DoD), the National Aeronautics and Space Administration (NASA) and the Federal Aviation Administration. In February 2020, the U.S. administration submitted its request for $740.5 billion in base national defense spending for FY21, congruent with the amended spending limit. The Continuing Resolution (CR), enacted on October 1, 2020, continues federal funding at FY20 appropriated levels through December 11, 2020. Congress and the President must enact either full-year FY21 appropriations bills or an additional CR to fund government departments and agencies beyond December 11, 2020 or a government shutdown could result, which may impact the Company’s operations.

The enacted FY20 appropriations included funding for Boeing's major programs, such as the F/A-18 Super Hornet, F-15EX, CH-47 Chinook, AH-64 Apache, V-22 Osprey, KC-46A Tanker, P-8 Poseidon and Space Launch System. However, there continues to be uncertainty with respect to future program-level appropriations for the U.S. DoD and other government agencies, including NASA. Future budget cuts or investment priority changes, including changes associated with the authorizations and appropriations process, could result in reductions, cancellations and/or delays of existing contracts or programs. Any of these impacts could have a material effect on our results of operations, financial position and/or cash flows.

Results of Operations

(Dollars in millions)	**Nine months ended September 30**		**Three months ended September 30**	
	2020	2019	**2020**	2019
Revenues	**$19,478**	$20,168	**$6,848**	$7,002
Earnings from operations	**$1,037**	$2,581	**$628**	$754
Operating margins	**5.3 %**	12.8 %	**9.2 %**	10.8 %

Since our operating cycle is long-term and involves many different types of development and production contracts with varying delivery and milestone schedules, the operating results of a particular period may not be indicative of future operating results. In addition, depending on the customer and their funding sources, our orders might be structured as annual follow on contracts, or as one large multi-year order or long-term award. As a result, period-to-period comparisons of backlog are not necessarily indicative of future workloads. The following discussions of comparative results among periods should be viewed in this context.

Deliveries of units for new-build production aircraft, including remanufactures and modifications, were as follows:

	Nine months ended September 30		**Three months ended September 30**	
	2020	2019	**2020**	2019
F/A-18 Models	**14**	16	**5**	6
F-15 Models	**3**	7		2
C-17 Globemaster III		1		1
CH-47 Chinook (New)	**19**	13	**4**	6
CH-47 Chinook (Renewed)	**3**	16	**2**	7
AH-64 Apache (New)	**18**	27	**7**	17
AH-64 Apache (Remanufactured)	**44**	56	**12**	21
P-8 Models	**9**	14	**3**	6
KC-46A Tanker	**10**	21	**4**	9
C-40A		2		2
Total	**120**	173	**37**	77

Revenues

BDS revenues for the nine months ended September 30, 2020 decreased by $690 million compared with the same period in 2019, primarily due to the unfavorable impact of cumulative contract catch-up adjustments for the nine months ended September 30, 2020, which was $485 million higher than the comparable period in the prior year largely due to the KC-46A Tanker charges in the first quarter of 2020. Additional decreases to revenues include those related to a KC-46A Tanker lot award in the third quarter of 2019, in addition to lower KC-46A Tanker and P-8 volume due to COVID-19 disruptions, partially offset by higher fighter aircraft volume.

BDS revenues for the three months ended September 30, 2020 decreased by $154 million compared with the same period in 2019 primarily due to a KC-46A Tanker lot award in the third quarter of 2019, partially offset by higher fighter volume. In addition, the net cumulative contract catch-up adjustments for the three months ended September 30, 2020 were $40 million more unfavorable than the comparable period in the prior year reflecting higher unfavorable adjustments compared to the prior period.

Earnings From Operations

BDS earnings from operations for the nine months ended September 30, 2020 decreased by $1,544 million compared with the same period in 2019, primarily due to the unfavorable impact of cumulative contract catch-up adjustments for the nine months ended September 30, 2020, which were $978 million higher than the prior year primarily due to charges of $1,045 million on KC-46A Tanker and $168 million on VC-25B. The lower earnings were also driven by lower gains on property sales compared to the same period in 2019 and lower equity earnings for our ULA joint venture. The KC-46A Tanker reach-forward loss reflects $551 million of costs associated with the agreement signed in April 2020 with the U.S. Air Force to develop and integrate a new Remote Vision System, and the remaining costs reflect productivity inefficiencies and COVID-19 related factory disruption. The reach-forward loss on VC-25B was associated with engineering inefficiencies from the COVID-19 environment. We believe these inefficiencies will result in staffing challenges, schedule inefficiencies, and higher costs in the upcoming phases of the program.

BDS earnings from operations for the three months ended September 30, 2020 decreased by $126 million compared with the same period in 2019, primarily due to the unfavorable impact of cumulative contract catch-up adjustments for the three months ended September 30, 2020, which were $118 million more unfavorable than the prior year, reflecting a $67 million charge on KC-46A Tanker during the third quarter of 2020 as the program continues to be adversely affected by productivity inefficiencies and COVID-19 related factory disruption.

BDS earnings from operations includes equity earnings of $45 million and $10 million for the nine and three months ended September 30, 2020 compared to $125 million and $60 million for the same periods in 2019. The year over year variance reflects lower earnings from our United Launch Alliance joint venture.

Backlog

Total backlog of $62,375 million at September 30, 2020 was largely unchanged from December 31, 2019.

Additional Considerations

Our BDS business includes a variety of development programs which have complex design and technical challenges. Many of these programs have cost-type contracting arrangements. In these cases, the associated financial risks are primarily in reduced fees, lower profit rates or program cancellation if cost, schedule or technical performance issues arise. Examples of these programs include Ground-based Midcourse Defense, Proprietary and Space Launch System programs.

Some of our development programs are contracted on a fixed-price basis and BDS customers are increasingly seeking fixed-price proposals for new programs. Examples of significant fixed-price development programs include Commercial Crew, KC-46A Tanker, MQ-25, T-7A Red Hawk, VC-25B, and commercial and military satellites. New programs could also have risk for reach-forward loss upon

contract award and during the period of contract performance. Many development programs have highly complex designs. As technical or quality issues arise during development, we may experience schedule delays and cost impacts, which could increase our estimated cost to perform the work or reduce our estimated price, either of which could result in a material charge or otherwise adversely affect our financial condition. These programs are ongoing, and while we believe the cost and fee estimates incorporated in the financial statements are appropriate, the technical complexity of these programs creates financial risk as additional completion costs may become necessary or scheduled delivery dates could be extended, which could trigger termination provisions, the loss of satellite in-orbit incentive payments, or other financially significant exposure. These programs have risk for reach-forward losses if our estimated costs exceed our estimated contract revenues.

Global Services

Results of Operations

(Dollars in millions)	**Nine months ended September 30**		**Three months ended September 30**	
	2020	2019	**2020**	2019
Revenues	**$11,810**	$13,820	**$3,694**	$4,658
Earnings from operations	**$307**	$2,013	**$271**	$673
Operating margins	**2.6 %**	14.6 %	**7.3 %**	14.4 %

Revenues

BGS revenues for the nine and three months ended September 30, 2020 decreased by $2,010 million and $964 million compared with the same periods in 2019 primarily due to lower commercial services revenue driven by impacts of the COVID-19 pandemic. These were partially offset by growth in government services revenue. The favorable impact of cumulative contract catch-up adjustments for the nine and three months ended September 30, 2020 were $54 million higher and $128 million higher than the comparable periods in the prior year. We expect the impacts of the COVID-19 pandemic to continue to reduce BGS commercial revenues in future quarters until the commercial airline industry environment recovers.

Earnings From Operations

BGS earnings from operations for the nine months ended September 30, 2020 decreased by $1,706 million compared with the same period in 2019, primarily due to earnings charges in the second quarter of 2020 of $370 million for higher expected credit losses primarily driven by customer liquidity issues, $237 million of inventory write-downs, $153 million of related impairments of distribution rights primarily driven by airlines' decisions to retire certain aircraft, and $99 million of contract termination and facility impairments charges, as well as $130 million of severance costs. These charges reflect the significant impacts of the COVID-19 pandemic on commercial airline customers' liquidity and demand for certain products as customers' fleet plans evolve to adapt to the sharp reduction in demand for air travel.

BGS earnings from operations for the three months ended September 30, 2020 decreased by $402 million compared with the same period in 2019, primarily due to lower revenues and severance charges of $66 million.

We expect the impacts of the COVID-19 pandemic to continue to reduce future earnings until the commercial airline industry environment recovers.

The favorable impact of cumulative contract catch-up adjustments for the nine and three months ended September 30, 2020 were $39 million higher and $103 million higher than the comparable periods in the prior year.

Backlog

BGS backlog decreased from $22,902 million as of December 31, 2019 to $17,464 million at September 30, 2020, primarily due to a reduction for commercial orders that in our assessment no longer meet the accounting requirements of ASC 606 for inclusion in backlog.

Boeing Capital

Results of Operations

(Dollars in millions)	**Nine months ended September 30**		**Three months ended September 30**	
	2020	2019	**2020**	2019
Revenues	**$205**	$207	**$71**	$66
Earnings from operations	**$47**	$86	**$30**	$29
Operating margins	**23 %**	42 %	**42 %**	44 %

Revenues

BCC segment revenues consist principally of lease income from equipment under operating lease, interest income from financing receivables and notes, and other income. BCC's revenues for the nine and three months ended September 30, 2020 were largely consistent with the same periods in 2019.

Earnings From Operations

BCC's earnings from operations are presented net of interest expense, provision for (recovery of) losses, asset impairment expense, depreciation on leased equipment and other operating expenses. Earnings from operations for the nine and three months ended September 30, 2020 decreased compared with the same periods in 2019 primarily due to higher asset impairment expense along with higher provision expense.

Financial Position

The following table presents selected financial data for BCC:

(Dollars in millions)	**September 30 2020**	December 31 2019
Customer financing and investment portfolio, net	**$2,037**	$2,251
Other assets, primarily cash and short-term investments	**707**	535
Total assets	**$2,744**	$2,786
Other liabilities, primarily deferred income taxes	**$401**	$432
Debt, including intercompany loans	**1,943**	1,960
Equity	**400**	394
Total liabilities and equity	**$2,744**	$2,786
Debt-to-equity ratio	**4.9-to-1**	5.0-to-1

BCC's customer financing and investment portfolio at September 30, 2020 decreased from December 31, 2019 primarily due to $237 million of note payoffs and portfolio run-off.

BCC enters into certain transactions with Boeing, reflected in Unallocated items, eliminations and other, in the form of intercompany guarantees and other subsidies that mitigate the effects of certain credit quality or asset impairment issues on the BCC segment.

Aircraft subject to leases with a carrying value of approximately $60 million are scheduled to be returned off lease in the next 12 months. We are seeking to remarket these aircraft or have the leases extended.

Liquidity and Capital Resources

Cash Flow Summary

(Dollars in millions)	**Nine months ended September 30**	
	2020	2019
Net (loss)/earnings	**($3,502)**	$374
Non-cash items	**2,874**	2,052
Changes in working capital	**(13,773)**	(2,652)
Net cash used by operating activities	**(14,401)**	(226)
Net cash used by investing activities	**(16,823)**	(2,047)
Net cash provided by financing activities	**32,274**	4,336
Effect of exchange rate changes on cash and cash equivalents	**26**	(27)
Net increase in cash & cash equivalents, including restricted	**1,076**	2,036
Cash & cash equivalents, including restricted, at beginning of year	**9,571**	7,813
Cash & cash equivalents, including restricted, at end of period	**$10,647**	$9,849

Operating Activities Net cash used by operating activities was $14.4 billion during the nine months ended September 30, 2020, compared with cash used of $0.2 billion during the same period in 2019 primarily driven by changes in working capital. The changes in working capital in 2020 are primarily driven by increases in commercial airplane inventory largely reflecting lower deliveries of wide-body aircraft and the continued 737 MAX grounding. The changes in working capital in 2020 also reflect lower accounts payable in 2020 due to reductions in commercial purchases from suppliers. Compensation payments to 737 MAX customers totaled $1.7 billion during the first nine months of 2020. Through the third quarter of 2019, we recorded an earnings charge and recognized a liability of $5.6 billion for customer considerations. In the third quarter of 2019, we collected $500 million from our insurances carriers, which was partially offset by compensation payments. The impacts of the COVID-19 pandemic and the 737 MAX grounding are expected to continue to have a significant negative impact on our operating cash flows during 2020.

Payables to suppliers who elected to participate in supply chain financing programs declined by $1.0 billion for the nine months ended September 30, 2020 and increased by $2.1 billion for the same period in the prior year. Supply chain financing is not material to our overall liquidity. The decline for the nine months ended September 30, 2020 was primarily due to reductions in commercial purchases from suppliers. The increase for the nine months ended September 30, 2019 reflects a combination of higher purchases, an extension of payment terms with certain suppliers, and increased utilization of our supply chain financing programs.

Investing Activities Cash used by investing activities was $16.8 billion during the nine months ended September 30, 2020, compared with $2.0 billion during the same period in 2019, primarily due to $15.6 billion of higher net contributions to investments. In the nine months ended September 30, 2020 and 2019, capital expenditures totaled $1.0 billion and $1.4 billion. We now expect capital expenditures in 2020 to be lower than 2019.

Financing Activities Cash provided by financing activities was $32.3 billion during the nine months ended September 30, 2020 compared with cash provided of $4.3 billion during the same period in 2019, primarily reflecting higher net borrowings, lower share repurchases and lower dividends paid. During the nine months ended September 30, 2020, new borrowings net of repayments were $33.6 billion compared with $10.6 billion in the same period in 2019, primarily due to $25 billion of fixed rate senior notes issued in the second quarter of 2020 and $13.8 billion of new borrowings under a two-year delayed draw term loan agreement entered into in the first quarter of 2020. For further discussion see Liquidity Matters in Note 1 to our Condensed Consolidated Financial Statements.

As of September 30, 2020, the total debt balance was $61.0 billion up from $27.3 billion at December 31, 2019. At September 30, 2020, $3.6 billion of debt was classified as short-term. Debt, including intercompany loans, attributable to BCC totaled $1.9 billion, of which $0.9 billion was classified as short-term.

During the nine months ended September 30, 2020 we did not repurchase any shares through our open market share repurchase program compared to share repurchases of $2.7 billion in the same period in 2019. Share repurchases under this plan had been suspended since April 2019. In March 2020, the Board of Directors terminated its prior authorization to repurchase shares of the Company's outstanding common stock.

During the nine months ended September 30, 2020 we paid dividends of $1.2 billion compared with $3.5 billion in the same period in 2019. In March 2020, the Company announced that our dividend will be suspended until further notice.

Capital Resources The impacts of the COVID-19 pandemic and 737 MAX grounding are having a significant negative impact on our liquidity and ongoing operations and creating significant uncertainty. For further discussion see Liquidity Matters in Note 1 to our Condensed Consolidated Financial Statements.

At September 30, 2020, we had $9.6 billion of unused borrowing capacity on revolving credit line agreements. We anticipate that these credit lines will primarily serve as backup liquidity to support our general corporate borrowing needs. $3.2 billion of the $9.6 billion is a 364-day revolving credit facility, which was set to expire in October 2020. We renewed that 364-day revolving credit facility at $3.1 billion, which now expires in October 2021.

Any future borrowings may affect our credit ratings and are subject to various debt covenants. At September 30, 2020, we were in compliance with the covenants for our debt and credit facilities. The most restrictive covenants include a limitation on mortgage debt and sale and leaseback transactions as a percentage of consolidated net tangible assets (as defined in the credit agreements), and a limitation on consolidated debt as a percentage of total capital (as defined). When considering debt covenants, we continue to have substantial borrowing capacity.

Financing commitments totaled $12.6 billion and $13.4 billion at September 30, 2020 and December 31, 2019. The decrease primarily relates to financing commitment expirations. We anticipate that we will not be required to fund a significant portion of our financing commitments as we continue to work with third party financiers to provide alternative financing to customers. Historically, we have not been required to fund significant amounts of outstanding commitments. However, there can be no assurances that we will not be required to fund greater amounts than historically required.

In the fourth quarter of 2020, the Company plans to contribute $3 billion of our common stock to our defined benefit plans pension fund. In the fourth quarter of 2020, the Company also plans to begin using our common stock in lieu of cash to fund Company contributions to our 401(k) plans for the foreseeable future, which we estimate will conserve approximately $1 billion of cash over the next 12 months. Common stock would be contributed to our 401(k) plans following each pay period. We expect this measure to further enable the Company to conserve cash. We will retain an independent fiduciary to manage and liquidate any stock contributed to these plans at its discretion.

For discussion regarding Embraer see Note 18 to our Condensed Consolidated Financial Statements.

Off-Balance Sheet Arrangements

We are a party to certain off-balance sheet arrangements including certain guarantees. For discussion of these arrangements, see Note 11 to our Condensed Consolidated Financial Statements.

Contingent Obligations

We have significant contingent obligations that arise in the ordinary course of business, which include the following:

Legal Various legal proceedings, claims and investigations are pending against us. Legal contingencies are discussed in Note 18 to our Condensed Consolidated Financial Statements.

Environmental Remediation We are involved with various environmental remediation activities and have recorded a liability of $571 million at September 30, 2020. For additional information, see Note 10 to our Condensed Consolidated Financial Statements.

Non-GAAP Measures

Core Operating Earnings, Core Operating Margin and Core Earnings Per Share

Our unaudited condensed consolidated interim financial statements are prepared in accordance with Generally Accepted Accounting Principles in the United States of America (GAAP) which we supplement with certain non-GAAP financial information. These non-GAAP measures should not be considered in isolation or as a substitute for the related GAAP measures, and other companies may define such measures differently. We encourage investors to review our financial statements and publicly-filed reports in their entirety and not to rely on any single financial measure. Core operating earnings, core operating margin and core earnings per share exclude the FAS/CAS service cost adjustment. The FAS/CAS service cost adjustment represents the difference between the FAS pension and postretirement service costs calculated under GAAP and costs allocated to the business segments. Core earnings per share excludes both the FAS/CAS service cost adjustment and non-operating pension and postretirement expenses. Non-operating pension and postretirement expenses represent the components of net periodic benefit costs other than service cost. Pension costs, comprising service and prior service costs computed in accordance with GAAP are allocated to BCA and certain BGS businesses supporting commercial customers. Pension costs allocated to BDS and BGS businesses supporting government customers are computed in accordance with U.S. Government Cost Accounting Standards (CAS), which employ different actuarial assumptions and accounting conventions than GAAP. CAS costs are allocable to government contracts. Other postretirement benefit costs are allocated to all business segments based on CAS, which is generally based on benefits paid.

The Pension FAS/CAS service cost adjustments recognized in (Loss)/earnings from operations were benefits of $773 million and $260 million for the nine and three months ended September 30, 2020, compared with benefits of $823 million and $274 million during the same periods in 2019. The non-operating pension expenses included in Other income, net were benefits of $255 million and $84 million for the nine and three months ended September 30, 2020, compared with benefits of $280 million and $93 million for the same periods in 2019. The benefits in 2020 reflect expected returns in excess of interest cost and amortization of actuarial losses.

For further discussion of pension and other postretirement costs see the Management's Discussion and Analysis on page 43 of this Form 10-Q and on page 48 of our 2019 Annual Report on Form 10-K. Management uses core operating earnings, core operating margin and core earnings per share for purposes of evaluating and forecasting underlying business performance. Management believes these core earnings measures provide investors additional insights into operational performance as unallocated pension and other postretirement benefit costs primarily represent costs driven by market factors and costs not allocable to U.S. government contracts.

Reconciliation of GAAP Measures to Non-GAAP Measures

The table below reconciles the non-GAAP financial measures of core operating earnings/loss, core operating margin and core earnings/loss per share with the most directly comparable GAAP financial measures of earnings/loss from operations, operating margins and diluted earnings/loss per share.

(Dollars in millions, except per share data)	**Nine months ended September 30**		**Three months ended September 30**	
	2020	2019	**2020**	2019
Revenues	**$42,854**	$58,648	**$14,139**	$19,980
(Loss)/earnings from operations, as reported	**($4,718)**	$229	**($401)**	$1,259
Operating margins	**(11.0)%**	0.4 %	**(2.8)%**	6.3 %
Pension FAS/CAS service cost adjustment [1]	**($773)**	($823)	**($260)**	($274)
Postretirement FAS/CAS service cost adjustment [1]	**(282)**	(270)	**(93)**	(90)
FAS/CAS service cost adjustment [1]	**($1,055)**	($1,093)	**($353)**	($364)
Core operating (loss)/earnings (non-GAAP)	**($5,773)**	($864)	**($754)**	$895
Core operating margins (non-GAAP)	**(13.5)%**	(1.5)%	**(5.3)%**	4.5 %
Diluted (loss)/earnings per share, as reported	**($6.10)**	$0.66	**($0.79)**	$2.05
Pension FAS/CAS service cost adjustment [1]	**(1.36)**	(1.45)	**(0.46)**	(0.48)
Postretirement FAS/CAS service cost adjustment [1]	**(0.50)**	(0.47)	**(0.16)**	(0.16)
Non-operating pension expense [2]	**(0.46)**	(0.49)	**(0.16)**	(0.17)
Non-operating postretirement expense [2]	**0.07**	0.14	**0.02**	0.05
Provision for deferred income taxes on adjustments [3]	**0.47**	0.48	**0.16**	0.16
Core (loss)/earnings per share (non-GAAP)	**($7.88)**	($1.13)	**($1.39)**	$1.45
Weighted average diluted shares (in millions)	**566.3**	570.4	**566.6**	569.2

[1] FAS/CAS service cost adjustment represents the difference between the FAS pension and postretirement service costs calculated under GAAP and costs allocated to the business segments. This adjustment is excluded from Core operating earnings/loss (non-GAAP).

[2] Non-operating pension and postretirement expenses represent the components of net periodic benefit costs other than service cost. These expenses are included in Other income, net and are excluded from Core earnings/loss per share (non-GAAP).

[3] The income tax impact is calculated using the U.S. corporate statutory tax rate.

Item 3. Quantitative and Qualitative Disclosures About Market Risk

We have financial instruments that are subject to interest rate risk, principally fixed- and floating-rate debt obligations, and customer financing assets and liabilities. The investors in our fixed-rate debt obligations do not generally have the right to demand we pay off these obligations prior to maturity. Therefore, exposure to interest rate risk is not believed to be material for our fixed-rate debt. In the first quarter of 2020, we entered into a $13.8 billion two-year delayed draw floating-rate term loan credit agreement. An increase or decrease of 100 basis points in interest rates on this floating-rate debt would increase or decrease our pre-tax earnings by $138 million over the next 12 months. Historically, we have not experienced material gains or losses on our customer financing assets and liabilities due to interest rate changes.

There have been no significant changes to our foreign currency exchange rate or commodity price risk since December 31, 2019.

Item 4. Controls and Procedures

(a) Evaluation of Disclosure Controls and Procedures.

Our Chief Executive Officer and Chief Financial Officer have evaluated our disclosure controls and procedures as of September 30, 2020 and have concluded that these disclosure controls and procedures are effective to ensure that information required to be disclosed by us in the reports that we file or submit under the Securities Exchange Act of 1934 is recorded, processed, summarized and reported within the time periods specified in the Securities and Exchange Commission's rules and forms and is accumulated and communicated to our management, including the Chief Executive Officer and Chief Financial Officer, as appropriate to allow timely decisions regarding required disclosure.

(b) Changes in Internal Control Over Financial Reporting.

There were no changes that occurred during the third quarter of 2020 that have materially affected or are reasonably likely to materially affect our internal control over financial reporting.

Part II. Other Information

Item 1. Legal Proceedings

Currently, we are involved in a number of legal proceedings. For a discussion of contingencies related to legal proceedings, see Note 18 to our Condensed Consolidated Financial Statements, which is hereby incorporated by reference.

Item 1A. Risk Factors

Certain risks described below update the risk factors in Part I, Item 1A. Risk Factors in our Annual Report on Form 10-K for the year ended December 31, 2019, as well as Part II, Item 1A. Risk Factors in our Quarterly Report on Form 10-Q for the quarter periods ended March 31, 2020 and June 30, 2020.

We face significant risks related to the spread of the novel coronavirus ("COVID-19") and the recent developments surrounding the global pandemic have had, and will continue to have, significant effects on our business, financial condition, results of operations, and cash flows. We also face significant risks related to the global economic downturn and severe reduction in commercial air traffic caused by the pandemic. These risks include materially reduced demand for our products and services, increased instability in our supply chain, and challenges to the ongoing viability of some of our customers. We may face similar risks in connection with any future public health crises, including any resurgence in the spread of COVID-19.

The COVID-19 pandemic has subjected our business, operations, financial performance, cash flows and financial condition to a number of risks, including, but not limited to those discussed below.

Operations-related risks: As a result of the COVID-19 pandemic, we are facing increased operational challenges from the need to protect employee health and safety. These challenges have included, and may in the future include production site shutdowns, and workplace disruptions and restrictions on the movement of people, raw materials and goods, both at our own facilities and at our customers and suppliers.

For example, during the second quarter, we temporarily suspended operations in Puget Sound, South Carolina, and Philadelphia, as well as at several other key production sites. We had not previously experienced a complete suspension of our operations at these production sites. While we have resumed operations at each of our key production sites we cannot predict where further production disruptions will be required or what the ongoing impact of COVID-19-related operating restrictions will be. For example, we continue to experience additional operating costs due to social distancing requirements and other factors related to COVID-19 restrictions. We cannot predict the impact that future production disruptions may have on our business, operations, financial performance and financial condition. We consult regularly with relevant federal, state, and municipal health authorities regarding the COVID-19 pandemic, and we may be required to impose additional operational restrictions and/or suspend operations at key production sites based on their recommendations and/or workplace disruptions caused by COVID-19.

Many of our suppliers also were required to suspend operations during the second quarter, and they may experience additional disruptions in the coming months. Any such disruptions could have severe adverse impacts on our production costs delivery schedule and/or ability to meet customer commitments.

Any prolonged suspension of operations or delayed recovery in our operations, and/or any similar delay with respect to resumption of operations by one or more of our key suppliers, or the failure of any of our key suppliers, would result in further challenges to our business, leading to a further material adverse effect on our business, financial condition, results of operations, and cash flows.

Liquidity risks: The COVID-19 pandemic has also had a significant impact on our liquidity and overall debt levels. During the nine months ended September 30, 2020, net cash used by operating activities was $14.4 billion. At September 30, 2020, cash and short-term investments totaled $27.1 billion. Our debt balance totaled $61.0 billion at September 30, 2020, up from $27.3 billion at December 31, 2019. We

expect negative operating cash flows in future quarters until deliveries resume and ramp up, and if the pace and scope of the recovery are worse than we currently contemplate, we may need to obtain additional financing in order to fund our operations and obligations. If we were to need to obtain additional financing, uncertainty related to COVID-19 and its impact on us and the aerospace industry could limit our access to credit markets and we may have difficulty obtaining financing on terms acceptable to us or at all. In addition, certain of our customers may also be unable to make timely payments to us. Factors that could limit our access to additional liquidity include disruptions in the global capital markets and/or additional declines in our financial performance, outlook or credit ratings. The occurrence of any or all of these events would be expected to adversely affect our ability to fund our operations and contractual commitments. In addition, downgrades in our credit ratings could adversely affect our cost of funds and related margins, liquidity, competitive position and access to capital markets, and a significant downgrade could have an adverse impact on our businesses.

Customer-related risks: Commercial air traffic has fallen dramatically due to the COVID-19 pandemic. While this trend has impacted passenger traffic most severely, near-term cargo traffic has also fallen significantly due to the global economic downturn and the reduction in cargo capacity on passenger airplanes. Most airlines have significantly reduced their capacity, and many could implement further reductions in the near future. Many airlines are also implementing significant reductions in staffing. These capacity changes are causing, and are expected to continue to cause, negative impacts to our customers' revenue, earnings, and cash flow, and in some cases may threaten the future viability of some of our customers, potentially causing defaults within our customer financing portfolio, which was $2.1 billion as of September 30, 2020 and/or requiring us to remarket aircraft that have already been produced and/or are currently in backlog. If we are unable to successfully remarket these aircraft and/or the narrow-body and wide-body markets do not recover as soon as we are currently assuming, or if we are required to further reduce production rates and/or contract the accounting quantity on any of our commercial programs, we could experience material reductions in earnings and/or be required to recognize a reach-forward loss on one or more of our programs. In addition, if 737 MAX aircraft remain grounded for an extended period of time, we may experience additional reductions to backlog and/or significant order cancellations. Additionally, we may experience fewer new orders and increased cancellations across all of our commercial airplane programs as a result of the COVID-19 pandemic and associated impacts on demand. Our customers may also lack sufficient liquidity to purchase new aircraft due to impacts from the pandemic. We are also observing a significant increase in the number of requests for payment deferrals, contract modifications, lease restructurings and similar actions, and these trends may lead to additional charges, impairments and other adverse financial impacts in our business over time. In addition, to the extent that customers have valid rights to cancel undelivered aircraft, we may be required to refund pre-delivery payments, putting additional constraints on our liquidity.

In addition to the near-term impact, there is risk that the industry implements longer-term strategies involving reduced capacity, shifting route patterns, and mitigation strategies related to impacts from COVID-19 and the risk of future public health crises. In addition, airlines may experience reduced demand due to reluctance by the flying public to travel due to travel restrictions and/or social distancing requirements.

As a result, there is significant uncertainty with respect to when commercial air traffic levels will begin to recover, and whether and at what point capacity will return to and/or exceed pre-COVID-19 levels. The COVID-19 pandemic also has increased, and its aftermath is also expected to continue to increase, uncertainty with respect to global trade volumes, putting significant negative pressure on cargo traffic. Any of these factors would have a significant impact on the demand for both single-aisle and wide-body commercial aircraft, as well as for the services we provide to commercial airlines. In addition, a lengthy period of reduced industry-wide demand for commercial aircraft would put additional pressure on our suppliers, resulting in increased procurement costs and/or additional supply chain disruption. To the extent that the COVID-19 pandemic or its aftermath further impacts demand for our products and services or impairs the viability of some of our customers and/or suppliers, our financial condition, results of operations, and cash flows could be adversely affected, and those impacts could be material.

Other risks: The magnitude and duration of the global COVID-19 pandemic is uncertain. As the pandemic continues to adversely affect our business and operating and financial results, it also is expected to have the effect of heightening many of the other risks described in the risk factors in our Annual Report on Form 10-K for the year ended December 31, 2019. Further, the COVID-19 pandemic may also affect our operating and financial results in a manner that is not presently known to us or that we currently do not expect to present significant risks to our operations or financial results.

Item 2. Unregistered Sales of Equity Securities and Use of Proceeds

Issuer Purchases of Equity Securities

The following table provides information about purchases we made during the quarter ended September 30, 2020 of equity securities that are registered by us pursuant to Section 12 of the Exchange Act:

(Dollars in millions, except per share data)

	(a)	(b)	(c)	(d)
	Total Number of Shares Purchased [1]	Average Price Paid per Share	Total Number of Shares Purchased as Part of Publicly Announced Plans or Programs	Approximate Dollar Value of Shares That May Yet be Purchased Under the Plans or Programs [2]
7/1/2020 thru 7/31/2020	17,219	$186.37		
8/1/2020 thru 8/31/2020	5,581	167.61		
9/1/2020 thru 9/30/2020	4,569	168.91		
Total	27,369	$179.63		

(1) A total of 27,369 shares were transferred to us from employees in satisfaction of minimum tax withholding obligations associated with the vesting of restricted stock units during the period. We did not purchase any shares of our common stock in the open market pursuant to our repurchase program or in swap transactions.

(2) On March 21, 2020, the Board of Directors terminated its prior authorization to repurchase shares of the Company's outstanding common stock. Share repurchases under this plan had been suspended since April 2019.

Item 3. Defaults Upon Senior Securities

Not applicable.

Item 4. Mine Safety Disclosures

Not applicable.

Item 5. Other Information

Not applicable.

Item 6. Exhibits

10.1	364-Day Credit Agreement, dated as of October 26, 2020, among The Boeing Company, for itself and on behalf of its Subsidiaries, as a Borrower, the Lenders party hereto, Citibank, N.A., as administrative agent, JPMorgan Chase Bank, N.A. as syndication agent and Citibank, N.A. and JPMorgan Chase Bank N.A., as Joint Lead Arrangers and Joint Book Managers (Exhibit 10.1 to the Company's Current Report on Form 8-K dated October 26, 2020)
15	Letter from Independent Registered Public Accounting Firm regarding unaudited interim financial information
31.1	Certification of Chief Executive Officer pursuant to Section 302 of the Sarbanes-Oxley Act of 2002
31.2	Certification of Chief Financial Officer pursuant to Section 302 of the Sarbanes-Oxley Act of 2002
32.1	Certification of Chief Executive Officer pursuant to Section 906 of the Sarbanes-Oxley Act of 2002
32.2	Certification of Chief Financial Officer pursuant to Section 906 of the Sarbanes-Oxley Act of 2002
101.INS	Inline XBRL Instance Document - the instance document does not appear in the Interactive Data File because its XBRL tags are embedded within the Inline XBRL document.
101.SCH	Inline XBRL Taxonomy Extension Schema Document
101.CAL	Inline XBRL Taxonomy Extension Calculation Linkbase Document
101.DEF	Inline XBRL Taxonomy Extension Definition Linkbase Document
101.LAB	Inline XBRL Taxonomy Extension Label Linkbase Document
101.PRE	Inline XBRL Taxonomy Extension Presentation Linkbase Document
104	The cover page for the Company's Quarterly Report on Form 10-Q for the quarter ended September 30, 2020, has been formatted in Inline XBRL.

* Management contract or compensatory plan

Signature

Pursuant to the requirements of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned thereunto duly authorized.

THE BOEING COMPANY
(Registrant)

October 28, 2020
(Date)

/s/ Robert E. Verbeck
Robert E. Verbeck

Senior Vice President and Controller

EXHIBIT 15

LETTER IN LIEU OF CONSENT FOR REVIEW REPORT

October 28, 2020

To the Board of Directors and Shareholders of
The Boeing Company
Chicago, Illinois

We have reviewed, in accordance with the standards of the Public Company Accounting Oversight Board (United States), the unaudited interim financial information of The Boeing Company and subsidiaries for the periods ended September 30, 2020 and 2019, as indicated in our report dated October 28, 2020; because we did not perform an audit, we expressed no opinion on that information.

We are aware that our report referred to above, which is included in your Quarterly Report on Form 10-Q for the quarter ended September 30, 2020, is incorporated by reference in Registration Statement Nos. 33-25332, 33-31434, 33-43854, 33-58798, 33-52773, 333-16363, 333-26867, 333-32461, 333-32491, 333-32499, 333-32567, 333-41920, 333-54234, 333-73252, 333-107677, 333-140837, 333-156403, 333-160752, 333-163637, 333-195777, and 333-228097 on Form S-8, and Registration Statement No. 333-219630 on Form S-3.

We also are aware that the aforementioned report, pursuant to Rule 436(c) under the Securities Act of 1933, is not considered a part of the Registration Statement prepared or certified by an accountant or a report prepared or certified by an accountant within the meaning of Sections 7 and 11 of that Act.

/s/ Deloitte & Touche LLP

Chicago, Illinois

EXHIBIT 31.1

CERTIFICATION PURSUANT TO
RULE 13a-14 OF THE SECURITIES EXCHANGE ACT OF 1934,
AS ADOPTED PURSUANT TO
SECTION 302 OF THE SARBANES-OXLEY ACT OF 2002

I, David L. Calhoun, certify that:

1. I have reviewed this quarterly report on Form 10-Q of The Boeing Company;

2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;

3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;

4. The registrant's other certifying officer(s) and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:

   (a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;

   (b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;

   (c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and

   (d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and

5. The registrant's other certifying officer(s) and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):

   (a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and

   (b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: October 28, 2020

/s/ David L. Calhoun

David L. Calhoun
President and Chief Executive Officer

EXHIBIT 31.2

CERTIFICATION PURSUANT TO
RULE 13a-14 OF THE SECURITIES EXCHANGE ACT OF 1934,
AS ADOPTED PURSUANT TO
SECTION 302 OF THE SARBANES-OXLEY ACT OF 2002

I, Gregory D. Smith, certify that:

1. I have reviewed this quarterly report on Form 10-Q of The Boeing Company;
2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;
4. The registrant's other certifying officer(s) and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:
   (a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
   (b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;
   (c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
   (d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and
5. The registrant's other certifying officer(s) and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):
   (a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and
   (b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: October 28, 2020

/s/ Gregory D. Smith

Gregory D. Smith
Chief Financial Officer and Executive Vice President Enterprise Operations

EXHIBIT 32.1

CERTIFICATION PURSUANT TO
18 U.S.C. SECTION 1350,
AS ADOPTED PURSUANT TO
SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002

In connection with the Quarterly Report of The Boeing Company (the "Company") on Form 10-Q for the period ending September 30, 2020, as filed with the Securities and Exchange Commission on the date hereof (the "Report"), I, David L. Calhoun, President and Chief Executive Officer of the Company, certify, pursuant to 18 U.S.C. § 1350, as adopted pursuant to § 906 of the Sarbanes-Oxley Act of 2002, that:

(1) The Report fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934, as amended; and

(2) The information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

/s/ David L. Calhoun

David L. Calhoun
President and Chief Executive Officer

October 28, 2020

EXHIBIT 32.2

CERTIFICATION PURSUANT TO
18 U.S.C. SECTION 1350,
AS ADOPTED PURSUANT TO
SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002

In connection with the Quarterly Report of The Boeing Company (the "Company") on Form 10-Q for the period ending September 30, 2020, as filed with the Securities and Exchange Commission on the date hereof (the "Report"), I, Gregory D. Smith, Chief Financial Officer and Executive Vice President Enterprise Operations of the Company, certify, pursuant to 18 U.S.C. § 1350, as adopted pursuant to § 906 of the Sarbanes-Oxley Act of 2002, that:

(1) The Report fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934, as amended; and

(2) The information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

/s/ Gregory D. Smith

Gregory D. Smith
Chief Financial Officer and Executive Vice President Enterprise Operations

October 28, 2020